APRIL 16, 1951 NEWS ISSUE

Electrical World

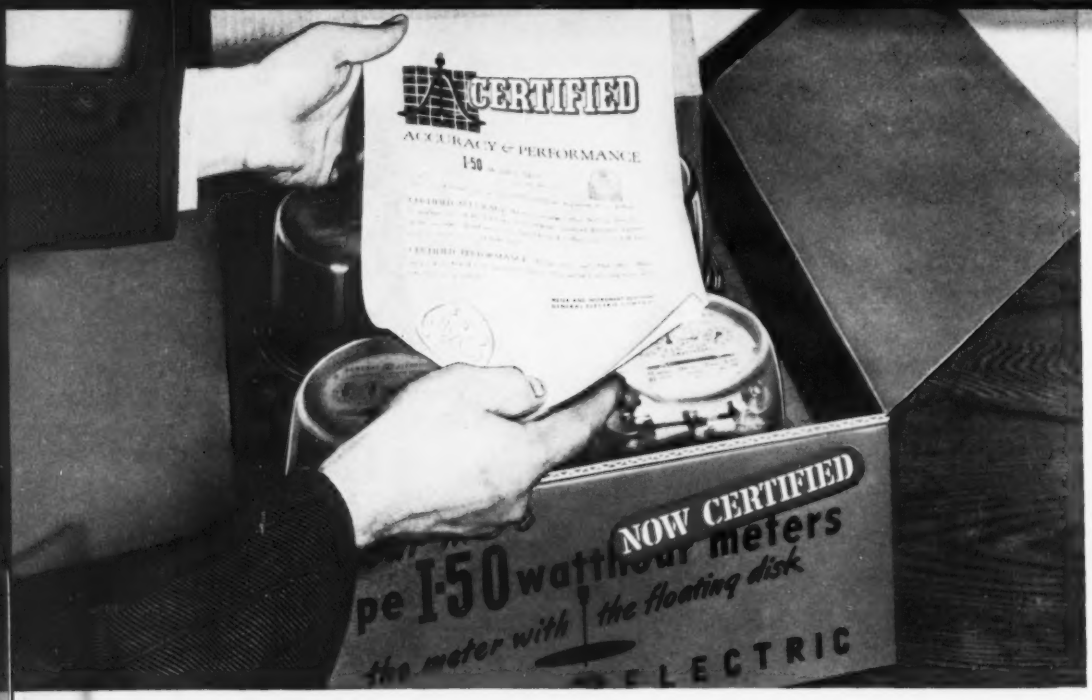
Price 35 Cents

A McGRAW-HILL PUBLICATION

Depa Administrator C. B. McManus with Deputies J. F. Fairman, left, and K. G. Whitaker

Single Length of Cable for 7 Miles of Sea ..... Page 16

Is Mr. Wilson Optimistic? ..... Page 30



Certification of G-E I-50 meters means that average accuracy (bar X) of the meters, when they leave the factory, is within ±0.1%, and dispersion about that average (sigma) is within 0.15% at full load. They are also 99.9% free from defects that might cause improper registration or operation.

Examination of graphite guide bushings for "floating disk" is one of 356 inspection points that help assure sustained accuracy of I-50 factory-certified meters.

Each I-50 meter is checked for full, lag, and light load on one of twenty final test panels. Calibration before and after 6000-mile shipping tests showed accuracy was only slightly affected.

CAN METER TESTING COSTS BE REDUCED?

Certification of I-50 watthour meters points to better utilization of manpower

Let's consider for a moment what factory-certified meters can mean to the electric utility industry.

In the first place, I-50 meters are so designed and manufactured that they leave the factory with an unusually high degree of accuracy and performance. Acceptance tests made by utilities on thousands of I-50 meters indicate that factory accuracy and performance are sustained.

This means that, as far as the meter itself is concerned, acceptance tests could be eliminated. Furthermore, the inherent long-term stability of I-50 accuracy and performance suggests the extension of periodic test intervals.

Because technically trained men are so important to the operation of any electric utility system, it seems to us that the significance of certified meters might well be interpreted in terms of reduced operating costs and better use of technical manpower. General Electric Company, Schenectady 5, N. Y.

MORE POWER TO AMERICA

GENERAL ELECTRIC

301-155

The Electrical Week

INDUSTRY MOBILIZATION — REA "interim" plan to distribute scarce materials among its borrowers gets approval from NPA (p 4) . . . Industry advisors appointed to NPA's Power Equipment Division (p 4) . . . M-50 order controls copper for utilities (p 5) . . . Industry M order amendments are listed on p 5.

WASHINGTON—Sepa begins survey of controversial Buggs Island-Langley Field, Va., line (p 6) . . . Interior will ask court to review FPC Roanoke Rapids decision (p 19).

ELSEWHERE—Mobilization for defense keynotes Missouri Valley Electric Association conference (p 6) . . . Midwest Power Conference hears U. S. aim is 25 million kw capacity by 1954 (p 11) . . . Industry is still interested in selling, EEI Sales Conference is told (p 12) . . . Industrial Electrification Council is being formed under EEI Auspices (p 13) . . . Cooling tower problems are discussed at ASME Spring meeting (p 14) . . . Is Mr. Wilson optimistic? See page 30.

• • •

Clifford B. McManus, president of the Southern Co and Depa administrator (See front cover), has received another honor. He has been elected president of the Southeastern Electric Exchange for the year beginning July 1. He has indicated he will resign as Depa administrator on that date.

So far there has been no apparent shortage of consumers goods, but one is coming. The reason: The pipeline from manufacturer to wholesaler to retailer was full when the Korean trouble started. Manufacturers are just beginning to feel the pinch in materials. Eventually the consumer will feel the pinch, but it is months away.

J. Wesley McAfee, president of Union Electric Co of Missouri and Electric Energy, Inc, has asked the New York Stock Exchange not to consider him for the presidency of the exchange. He said that press of duties connected with the nation's mobilization program would prevent him from accepting.

When molybdenum is allocated after May 1, alloy steel makers, steel foundries, electric and electronic equipment makers and the chemical industry will have first chance at the scarce supply. Allocation will replace individual directives which have been used since January. Molybdenum wire, rod, powder, and sheet are regulated in the new order.

Top federal officials now declare that power capacity must jump 22 million kw during the next three years, a gain of more than 30% over present capacity of 67.5 million kw.

Idaho Power Co points to increased power estimates by the Bureau of Reclamation for the proposed Hells Canyon Dam, charges the bureau has "suddenly developed exaggerated power production figures." The bureau's answer is that the jump in the estimates in two years from 854,000 kw to 1,430,000 kw is due to authorization of four other dams in the Columbia Basin, increasing storage.

Production of tin-in-concentrates in January was 13,300 long tons. December production was 16,000 tons. A sharp drop in Bolivian exports was the main cause of the decline.

Notes From The News

Favorable water conditions have enabled Public Service Co of New Hampshire to put its floating steam plant Resistance into naval dry dock. The plant will be overhauled, cleaned, and repaired. The job will take about three weeks . . . Victoria, Australia, is experiencing stringent electric power rationing with the prospects of worse cuts yet to come as winter approaches. Lower supplies of black coal from New South Wales and a dry summer have caused a drop in power generation. Commercial users have been ordered to cut interior lighting in half and advertising and display lighting has been banned. In the home no electric appliances may be used for two hours each morning and electric water heaters may be used only every other day . . . A cafe owner in London has beaten the government's ban on shop window lighting by installing a "windmill" generator on the roof. The generators charge wet batteries wired to the window lights and require only a small breeze to work . . . On complaint of Appalachian Electric Power Co that boys in South Bluefield, Va., were knocking out street lights, police rounded up four boys they had caught firing at the lights with apples. They were surprised to discover that two were sons of Appalachian Electric employees.

REA Gets Allotment of 2nd Quarter Materials for Allocation to Co-ops

National Production Authority Administrator Manly Fleischmann has approved the "interim" plan under which the Rural Electrification Administration will distribute scarce materials among its own borrowers in the second quarter (EW, April 9, p 82).

Fleischmann in a carefully worded letter to Interior Secretary Oscar L. Chapman said that he was approving the "subdelegation" of authority from Chapman to REA. The NPA administrator emphasized that giving REA authority over REA borrowers' materials allocations did not diminish Chapman's responsibility for defense power requirements under the mobilization program.

Chapman has advised Agriculture Secretary Charles F. Brannan that REA will in most cases be expected to share in the reductions made in Defense Electric Power Administration estimates of industry requirements by NPA and Defense Production Administration.

Here's how the second quarter materials allotments for electric power will be granted to REA for its borrowers:

Copper—REA requests for conductor were 8.7 million lb. The total industry allotment was 85% of the total requested. So REA will be granted 85% of its requirements, or 7.4 million lb. REA also requested 56,850 lb of copper shapes and forms for construction, in a total industry request of 6.4 million. The industry allotment was dropped to 5.4 million lb, but REA will be granted its full estimate of 56,850 lb, despite the 16% slash handed the industry total.

Aluminum—REA asked 14.3 million lb of aluminum out of the 53.5 million sought by Depa for the industry. The allotment was 49 million lb, or 91.4%; so REA will be granted a proportional share of 13.1 million lb. REA already had distributed 1 million lb for the second quarter; so it will receive an additional allotment of only 12.1 million lb.

Steel—REA steel requirements were estimated at 7,547 tons for the second quarter, or 5,032 tons for the months of May and June for which allocations will be made. Of the total requested by Depa, 91.5% was approved. REA will get 91.5% of its requirements or 2,302 tons per month.

G. A. BALL, Rural Electrification Administration, Electrical Section chief of NPA's Power Equipment Division

Boiler Tube Shortage Threatens Power Growth

Newest threat to power expansion is an acute shortage of boiler tubes.

Director Charles F. Kells of the National Production Authority's Power Equipment Division predicts that new delays in installation of new generating capacity may result from the boiler tube shortage.

Seamless carbon steel tube rounds are not available in large enough supply to meet the need of boiler manufacturers. Defense Orders (DO's) won't help. The boiler makers can and are using them to order the tubes, but there is a shortage of tube rounds. The problem is that not enough tube rounds were earmarked for boiler tube requirements. Only solution appears to be immediate diversion of steel tube rounds for boiler tubes. This is being requested by PED.

NPA Industry Advisory Committees Appointed

Three industry advisory committees to the National Production Authority's Power Equipment Division have been named. Members of these committees are:

Boilers and Related Equipment—W. T. McCullogh, Jr, Babcock & Wilcox Co; Paul M. Fleming, Bigelow Co; F. G. Brinig, Erie City Iron Works; C. W. Miller, E. Keeler Co; F. H. Daniels, Riley Stoker Co; W. H. Riecks, Detroit Stoker Co; L. C. Train, Lucey Boiler Manufacturing Co; W. P. E. Ainsworth, Combustion Engineering-Superheater, Inc; F. W. Hainer, Cleaver-Brooks Co; P. W. Foster, Jr, Foster Wheeler Corp; R. J. Bros, William Bros Boiler & Manufacturing Co; R. J. Stormont, Wickes Boiler Co; and A. B. Schafer, Puget Sound Machinery Depot.

Diesel Engines — John Thomas, American Locomotive Co; Walter A. Rentschler, Baldwin-Lima-Hamilton Corp; C. Paul Clark, Clark Brothers Co; Gordon Lefebvre, Cooper-Bessemer Corp; William E. Buts, General Metals Corp; R. H. Morse, Fairbanks Morse & Co; Edward Rathbun, Rathbun-Jones Engineering Co; G. W. Codrington, General Motors Corp; M. C. Davison, Ingersoll-Rand Co; F. Howard Kilberry, National Supply Co; R. E. Friend, Nordberg Manufacturing Co; Otto H. Fischer, Union Diesel Engine Co; E. J. Schwanhausser, Worthington Pump & Machine Corp; and R. A. Rankin, Chicago Pneumatic Tool Co.

Hydraulic Turbine and Related Equipment—V. J. Egan and J. Frank Roberts, Allis-Chalmers Manufacturing Co; R. S. Quick, Baldwin-Lima-Hamilton Corp; George E. Patterson, General Electric Co; Robert L. Hatch, Rodney Hunt & Co; J. Robert Groff, James Leffel Manufacturing Co; Bruce L. Vanderboegh, Newport News Shipbuilding & Drydock Co; Beauchamp E. Smith, S. Morgan Smith Co; A. C. Meixner, Westinghouse Electric Corp; and Irl C. Martin, Woodward Governor Co.

•

Munro Joins PED

Harry C. Munro, formerly of the Federal Power Commission, has joined the Hydraulic Turbine Section of the National Production Authority's Power Equipment Division.

F. W. BOLEN, formerly with the Department of State, is the director of the Division of Administration of Depa

A. B. LEONARD, Los Angeles business man, is chief of the Coordination Section of NPA's Power Equipment Division

M-50 Controls Copper for Utilities; Quarter Quota Is 92.7 Million Lb

Copper last week became a "program material" under the National Production Authority's M-50 electric utilities order.

NPA has allotted 92.7 million lb of copper for the electric utilities for the second quarter. This includes 87.3 million lb of copper conductor and 5.4 million lb of copper forms and shapes for construction. It was learned that Depa had requested 109.1 million lb of copper, 102.7 million lb of conductor plus 6.4 million lb for construction. Actual NPA allotment was 85% of the conductor and 84% of the forms requested.

The earlier NPA allotment of 49 million lb of aluminum conductor (EW, April 9, p 81) was 91.4% of Depa's total request for the second quarter for 53.5 million lb. Steel which will be programmed for the electric utilities by Depa for deliveries in the months of May and June also took a similar cut. Depa asked for 98,385 tons of steel for each of the two months and will be alloted 90,000 tons per month, or 91.5% of the total.

Under the new copper program electric utilities are again given alternate methods of computing their minor requirements + maintenance, repair and operating supplies, and minor plant additions. For copper, the standard quota is 18.75% of a utility's 1950 requirements of copper wire mill products, brass mill products, and foundry products. The alternative quota for copper is 75% of the use in the corresponding (second) quarter of 1950. As in the aluminum regulations the utility may take its choice of which method it desires to use. The amount of the quota may be ordered as DO-48 (minor).

A major difference between aluminum and copper conductor rules is that copper is to be computed as the copper content of copper conductor, or the net weight of copper. Aluminum is calculated simply as the gross weight of the conductor. Exempt from the quantity restrictions are utilities which do not order more than 5,000 lb net weight during the quarter.

Depa last week issued a new form, Depa 4-C, which must be filed by April 23 or before a utility uses the DO-48 (minor) to order copper. Similar to the 4-A aluminum form, the new statement covers utility copper requirements by quarters and includes the utility's choice between the two methods of computing minor requirement quotas.

•

Industry M Orders

The following M orders of interest to the electrical industry have been issued by the National Production Authority. Orders not of interest have been omitted. Copies of orders may be secured from the National Production Authority, Washington 25, D. C., or any regional office of the Department of Commerce.

Amendments to Previous Orders

Amendment to M-2 establishes distribution of **rubber** during April.
Amendment to M-12 relaxes restrictions against use of **copper** in parts.
Amendment to M-38 tightens controls to stop further use of **lead** as a substitute.

Depa's 'Big Three'

(See Front Cover)

With the recent appointment of Kenneth G. Whitaker and James F. Fairman as deputy administrators under Clifford B. McManus the three top jobs in the Defense Electric Power Administration have been filled. Administrator McManus is president of the Southern Co and a former president of Georgia Power Co. Deputy Whitaker is administrative assistant to the Electric Power Board of Chattanooga. Fairman is a vice president of Consolidated Edison Co of New York.

April 16, 1951 ELECTRICAL WORLD Vol. 135, No. 16
Member ABC and ABP

Published weekly by McGraw-Hill Publishing Company, Inc., James H. McGraw (1860-1948), Founder. Publication Office, 99-129 North Broadway, Albany 1, N. Y. Executive, Editorial and Advertising Office: McGraw-Hill Building, 330 W. 42nd St., New York 18, N. Y. Curtis W. McGraw, President; Willard Chevalier, Executive Vice-President; Joseph A. Gerardi, Vice-President and Treasurer; John J. Cooke, Secretary; Paul Montgomery, Senior Vice-President, Publications Division; Ralph B. Smith, Editorial Director; Nelson Bond, Vice-President and Director of Advertising; J. E. Blackburn, Jr., Vice-President and Director of Circulation.
Subscriptions: Address correspondence to Electrical World—Subscription Service, 99-129 N. Broadway, Albany 1, N. Y., or 330 W. 42nd St., New York 18, N. Y. Allow ten days for change of address.
Please indicate position and company connection on all subscription orders.
Single copies 25¢. For the United States and possessions $6 a year, $9 for two years. Canada, $7 for one year, $11 for two years, $14 for three years. (Canadian money, at par.) Pan-American countries, $15 for one year, $25 for two years, $30 for three years. All other countries $20 for one year, $30 for two years, $40 for three years. Entered as second class matter, November 16, 1936, at the Post Office at Albany, N. Y., under the Act of March 3, 1879. Printed in USA. Copyright 1951, by McGraw-Hill Publishing Company, Inc. Permission required to reproduce any of contents.

MISSOURI VALLEY Electric Association annual meeting had these men as its headliners: O. R. Hantla, left, vice general chairman; E. J. Drewelow, general chairman; Edward L. Shutts, association president; F. A. Kolb, special assistant to C. B. McManus, Depa administrator; and A. A. Johnson, Westinghouse Electric Corp

Mobilization for Defense is Keynote of Missouri Valley Electric Confab

Mobilization for defense was the keynote sounded by Edward L. Shutts, president of Missouri Valley Electric Association, in addressing the association's annual Engineering Conference at Kansas City, Mo.

Indicating that things are in an organizational phase now, F. A. Kolb, special assistant to the administrator of Defense Electric Power Administration, said he expected the materials supply situation would be reasonably well worked out in a few months.

Problems to be solved in rapid expansion of the electrical industry in the present emergency were listed by A. A. Johnson of Westinghouse Electric Corp as follows:

Long range overall system planning; reinforcement and modernization of subtransmission and distribution systems; changing of some areas to underground circuits; reduction in number of voltages on systems; more standardization of equipment ratings; more serious consideration of service reliability; economic solution of the noise problem and greater participation in community affairs.

Technical discussions at the conference covered a variety of topics, ranging from use of microwave communications to problems of var measurement.

Microwave is the most rapidly growing method of communication in the power system field, E. W. Kenefake of General Electric Co told the power systems committee. Microwave is capable of a large number of channels, and is being used for many purposes including protective relaying. It is necessary, he said, to analyze individual applications to determine the desirability of using carrier current or microwave.

Problems of var measurement and advantages of selling vars to customers were discussed by Douglas List of Duncan Electric Manufacturing Co. He pointed out the utility industry can take advantage of load diversity in supplying vars at a cost lower than the customer can supply them, just as it does in the case of watts.

High pressure contacts, cementing of hardware to insulators, and special designs for operation under ice conditions have made outdoor disconnects of today vastly better than those of a couple of decades ago, Roy M. Smith of Railway and Industrial Engineering Co told the electrical apparatus committee.

Metal-clad switchgear is particularly suited for power plant auxiliaries where dirt is a problem and suitable equipment can be made available to meet all requirements, according to H. H. Ackmann of Allis Chalmers, who spoke to the same committee.

Demand metering, it appears, will be extended into residential and farm class loads where demands are of the order of 3 kv and above, F. E. Davis of Commonwealth Services told the meter committee. It also appears that the combination thermal watthour demand meter will be largely chosen for this purpose and the industry should arrive at reasonable standards for such meters, he said.

•

Sepa Begins Surveys on Controversial Line

Department of Interior last week announced its Southeastern Power Administration is beginning surveys for construction of the controversial Buggs Island-Langley Field, Va., transmission line.

The department said surveys were begun after "unsuccessful" negotiations with Virginia Electric & Power Co for a contract under which company lines would be used to carry power from the federal power project to the National Advisory Committee for Aeronautics installation at Langley Field.

Administrator Ben W. Creim of Sepa charged that Vepco's proposed fee for carrying the federal load "would prevent the government from serving its own laboratory at Langley and other important defense loads in the Norfolk area."

Creim said eight day-long sessions with Vepco officials had brought agreement on all major provisions of the proposed contract except the fee.

Lines to be constructed by the government may also be used eventually to serve electric co-ops or municipal systems in addition to the aeronautical laboratory, the statement said.

Sepa received an appropriation of $1,850,000 with which to begin construction of the line by a close 43-41 Senate vote on the final day of the 81st Congress.

•

Heads Hawaii PUC

J. Harold Hughes, attorney, is the new chairman of the Hawaii Public Utilities Commission, succeeding James M. O'Dowda.

Jumper loops at strain and deadend points on your transmission lines can be built with continuous, un-cut conductor. This better, more modern construction is inexpensive and ends the trouble common with spliced loops.

Basically inexpensive, the O-B Hi-Lite strain clamp is attached without cutting the conductor. No more complicated equipment than a common hand wrench is required for installation. No special skill is needed to do the job in a minute or two. From the first day to the life of the line, the clamp's holding power is subject to inspection, and this holding power will develop the full working strength of the cable without slip. Above all, the continuous, un-spliced conductor is carried through the strain point, and all splice troubles thus eliminated.

Investigate this modern method of deadending with O-B Hi-Lite strain clamps. You will match your saving in trouble with a saving in money.

Ohio Brass

MANSFIELD, OHIO

4122 M

How to pack 64% more current into your existing raceways

Have you considered meeting today's extra load demands *without* adding new raceways? By installing General Electric Deltabeston* AVA cable in your present raceways, you actually may get as much as 64% more current-carrying capacity than ordinary 60 C cable can provide.

HERE'S WHY: G-E Deltabeston AVA cable is doubly insulated with heat-beating asbestos, plus No. 1799 varnished cambric. This combination permits the cable to operate effectively at higher copper temperatures. Thus, at normal ambient temperatures, AVA cable can safely carry *more current* than ordinary types. The inherent non-aging characteristics of asbestos give the extra advantages of long life and efficient operation.

When you modernize your electric system, look to Deltabeston AVA for savings in materials, dollars, time . . . with no raceways to replace, Deltabeston AVA cable is easy to install. And when planning *new* construction, specify Deltabeston AVA cable, so that you will be prepared for future load increases.

For more information, call on your local G-E distributor. Section W58-427, Construction Materials Department, General Electric Company, Bridgeport 2, Conn.

*Registered Trade Mark of General Electric Company

DELTABESTON
Wires and Cables
Built to beat the heat

You can put your confidence in—

GENERAL ELECTRIC

Don't miss this SURE-FIRE SALES PROGRAM!

A wow of an idea that sells Sylvania Tubes by the case

Now your customers can buy Sylvania Tubes in lots of 24 or more with the understanding that these tubes have got to be *the best* . . . or customers get their money back.

That's the substance of the most dramatic and compelling fluorescent lighting offer ever made.

Today this offer is being placed before millions of readers in big, smashing, full-page ads in *Time, Business Week, Newsweek, Today's Business,* and *Electrified Industry. Also* in *Chain Store Age, Purchasing,* and a large group of *important industrial magazines.*

In addition, the nation-wide TV show "Beat the Clock" is broadcasting Sylvania's great offer to prospects everywhere.

So get in those Sylvania Tube orders now. Stock up and follow up, and you'll be sure to *clean up!* For full details, see your Sylvania Representative or mail the coupon NOW!

SYLVANIA ANNOUNCES
THE MOST CHALLENGING FLUORESCENT LIGHTING OFFER EVER MADE!
Try 24 Sylvania Fluorescent Tubes of any popular type. If they don't give more light and maintain color and brightness for a longer time than any other brand, send them back and your money will be refunded.
SYLVANIA ELECTRIC
Newsweek
BUSINESS WEEK
TIME
Today's Business
Electrified INDUSTRY

Sylvania Electric Products Inc.
Dept. L-7204, 1740 Broadway
New York 19, N. Y.

Please send me new folder explaining Sylvania's remarkable fluorescent lighting plan.

*Name*_____

*Street*_____

*City*_____ *Zone*____ *State*_____

SYLVANIA ELECTRIC PRODUCTS INC. 1901-1951 50th ANNIVERSARY FIVE DECADES OF PROGRESS

SYLVANIA ELECTRIC

FLUORESCENT TUBES, FIXTURES, SIGN TUBING, WIRING DEVICES; LIGHT BULBS; RADIO TUBES; TELEVISION PICTURE TUBES; ELECTRONIC PRODUCTS; ELECTRONIC TEST EQUIPMENT; PHOTOLAMPS; TELEVISION SETS

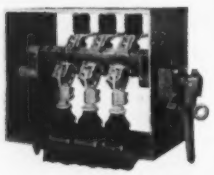
INCREASE FLEXIBILITY—REDUCE MAINTENANCE
with G&W Load Break Oil Switches

With all live parts immersed in oil, these 400 ampere switches require a bare minimum of attention after installation. Full load currents can be interrupted repeatedly without ever opening the switch tank. All joints are securely sealed with Resistoyl gaskets to keep oil inside and foreign elements outside the tank. Since neither water, wind, ice, sleet, nor atmospheric contamination will ever affect switch operation, Type "RA" switches may be installed in any underground or exposed location.

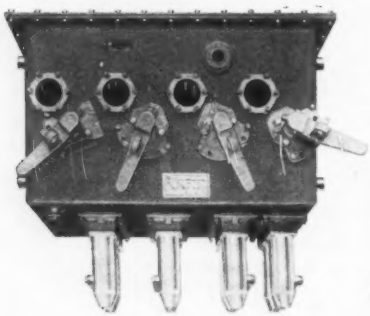
G & W Type "RA" switches provide an efficient and economical method of interrupting currents up to 400 amperes. Substantial savings in equipment cost are realized when Type "RA" load break oil switches are used with power fuses in installations where expensive circuit breakers would otherwise be required.

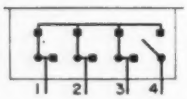
Almost any switching arrangement can be obtained with Type "RA" switches. Basic unit parts are merely arranged to meet individual requirements.

Two of the most common arrangements are shown below. Write or ask your nearest G & W representative for information on the switches needed in your distribution plans.



This cutaway view of a single-throw switch shows the construction of rocker arm links with pivot points anchored solidly in welded steel tank walls. There is no breaking force applied to porcelain bushings when switch is operated.





Main feeder looped through with load connected through bus.

Main feeder looped through. Load connected to alternate feeder.

This four-way switch uses four sets of links and internal bus. Main feeder (1, 2) may be looped through with load (3) connected or isolated. Load may be connected to alternate feeder (4) without affecting main feeders. Large viewing windows permit visual observation of switch position without opening tank.

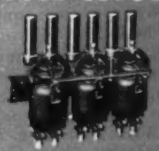
Use G & W Cable Accessories for
TERMINATING
FUSING—SWITCHING
SPLICING—CONNECTING

POTHEADS

Trouble-Free Cable Terminations
Capnut Style Disconnecting Straight Through
Write for Bulletin AB51

Type "ST-SODERTITE"—*Bulletin AA50*

OIL FUSE CUTOUTS



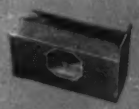
Single or Gang Operated Fuse-Switch Units
Write for Bulletin CA50

CABLE BOXES

Air or Oil Filled
Fuses, Links or Direct Connection

Many Sizes, Styles, Ratings

UNIT SPLICING KITS



Packaged Materials for Properly Designed Joints for all Types of Cables
Write for Bulletin J50

G&W ELECTRIC SPECIALTY COMPANY
7780 DANTE AVENUE • CHICAGO 19, ILLINOIS, U.S.A.
Representatives in principal cities. In Canada, Powerlite Devices, Ltd., Toronto

MIDWEST POWER CONFEREES indulge in between-session small talk. L to R at top, H. G. Ebdon, Combustion Engineering-Superheater, Inc; J. S. Bennett, American Engineering Co; B. G. Elliott, U of Wis. Below, E. C. Bailey, ASME; H. C. Shroeder, Sargent & Lundy; J. C. Woods and R. B. Gutekunst, Commonwealth Edison Co

U. S. Aim is 25 Million Kw Capacity by 1954, Midwest Conference Hears

One of the most serious problems facing the power industry is to obtain delivery of the 25,000,000 kw of generating capacity on order March 1, 1951 for delivery before the end of 1953. This figure was given to the Midwest Power Conference in Chicago, April 4-6 by Walker L. Cisler, executive vice president, Detroit Edison Co. He added that manufacturing production will have to be 11.4 million kw in 1952 and 9.3 in 1953 to hold the schedule.

Surveyed facts are even better now than they were during the recent war and as a result the forecast of required capability has been stepped up over 8 million kw for the end of 1953. Unless there is a hitch the margin will then be a comfortable 17%. The critical period, he predicted, will be the winter of 1952-53. Meanwhile equipment will have been added in 270 new or existing plants.

Unfortunately, the industry finds itself dealing with two or three agencies instead of the single, effective OWU of 1941-45 in getting authorizations, Cisler said. He hazarded the belief that we have more to fear from ineptness at home than from aggression from without.

In the opening address W. C. Mullendore, president, Southern California Edison Co, warned that Marxian socialism was making relentless inroads into the American pattern of government. Engineers and other segments, he said, must organize to fight the inroads of collectivism and socialization now undermining self-reliance, independence, and freedom.

In the new Ridgeland Station of Commonwealth Edison Co in Chicago most all auxiliary equipment is on a single level to minimize operating attendance and initial investment. H. C. Schroeder of Sargent & Lundy added that all coal handling except the gantry crane and car dumper is controlled from within the plant. He said special welding techniques and inspection had to be devised for the large pipes needed for the 150 Mw cross-compound unit operating at 1800 psi 1050 F.

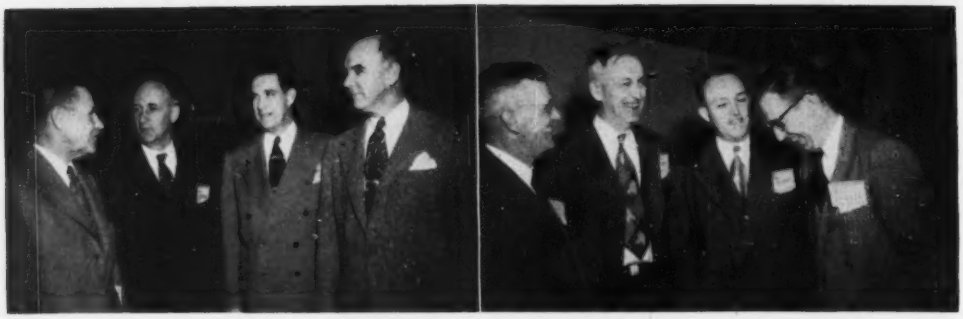
Auxiliaries Concentrated

Concentration of the auxiliaries tended to lengthen the control runs, said John C. Wood of Commonwealth Edison, but losses and extra cost were insignificant in comparison to the losses in piping otherwise incurred. Flywheeled exciters ride through momentary interruptions during transfer. Wood added that instrumentation is dominantly electronic because response of pneumatic and hydraulic combustion control was deemed inadequate. Pure water for cleansing the system was obtained, according to Chief Engineer R. B. Gutekunst, by hauling 3½ million gallons from other stations in leased 4,000-gallon milk trucks. He said the present unit requires a force of 140.

Nearly 70% of the utility business booked in 1950 and thus far in 1951 by one boiler manufacturer has been for reheat units, said H. G. Ebdon, Combustion Engineering-Superheater, in support of the assertion that the industry has adopted reheat in a big way. In the last 14 months 82 reheat jobs aggregating 9,690,000 kw were placed on order and all but one of the 15 largest utilities were embraced. The trend toward reheat is a misnomer, Ebdon said, because reheat units are now a confirmed preference.

Cost of Gas Turbines

Gas turbine plants of 3,500 kw to 5,000 kw cost from $155 to $215 per kw, according to A. G. Mellor, General Electric Co. He added that the high efficiency compound cycle is usually justified if fuel costs more than 11¢ per million Btu. Diesels may have a better heat rate but they often are derated whereas the gas turbine has excess capability. All factors combine to give the gas turbine a slight edge on the annual basis.



EEI SALES CONFERENCE leaders get together between sessions. L to R, Merrill E. Skinner, Commercial Division General Committee chairman; Louis V. Sutton, EEI president; James T. Coatsworth, EEI commercial director; and Dr. Kenneth McFarland, Supt of Schools, Topeka, Kan. Right panel, delegates Joe Powell, Mississippi Power & Light Co; W. H. McInnis and Paul Brooks, Ebasco Services, Inc; and R. J. Grueser, Columbus & Southern Ohio Electric Co, talk it over

Industry Still Interested in Selling, EEI Chicago Conference Indicates

Electric utilities of this country are definitely concerned about selling. This was evident from the largest attendance yet—more than 1,000—at the 17th annual sales conference of the Edison Electric Institute in Chicago. That they should keep on selling was made clear by reports from appliance manufacturers that merchandise is crowding inventories and is still in production despite cut backs and shortages.

Asserting there is a selling job to be done, L. V. Sutton, EEI president, said a sales department cannot be turned on and off like a faucet. He said the value of utility selling lies not only in getting electrical goods and service into the hands of users, but also in improvement of public relations and preservation of a free economy necessary to power company survival. Sutton placed particular emphasis on home service activities which, he said, should not be allowed to fall off.

Present conditions require imaginative planning of sales efforts, said Merrill E. Skinner, chairman of EEI Commercial Division. Conventional methods must be re-evaluated and adapted to changing circumstances.

"We must be ready", he said, "to shift to meet every challenge, and to make changes without awkward and expensive pauses in our activities."

In respect to the production of electrical goods, J. M. McKibben, Westinghouse Electric Corp vice-president, said that once the defense emergency is past, the facility to produce consumer goods will be twice as great as in the "miracle" selling year of 1950. Two electric appliances will be made for one made before. Sales results will have to be doubled practically overnight. "In order to build for the future," he said, "we must keep our sales effort strong and alert."

Manpower demands of the armed services will pose a difficult problem for utility sales departments, according to C. B. Boulet, Wisconsin Public Service Corp. He advised sales executives (1) to study present manpower and what may affect it; (2) to plan for adjustment of sales forces to selling needs; (3) to consider shifting of sales personnel to other departments; (4) to select new employees carefully; (5) to train present and future personnel to meet conditions of the times.

SALES AND SELLING are topics for discussion among N. M. Mathews and Frank E. Watts of "The Farm Journal" and Les Taylor, Mississippi Power & Light Co. Five women delegates, right panel, work up their own electric sales talk. Left to right they are Mary Webber, General Electric Co; Stella M. Fetzer, Cincinnati Gas & Electric Co; Myrtle Fahsbender, Westinghouse Electric Corp; Mary E. Dodds, Toledo Edison Co; and Mary W. Held, Cincinnati Gas & Electric Co

Industrial Electrification Council Forming Under Auspices of EEI

A new Industrial Electrification Council is in the very early stages of formation, R. G. Ely, chairman of the EEI Industrial Power and Heating Section and director of sales, Connecticut Light & Power Co, told the EEI Sales Conference in Chicago.

The council will disseminate to American industry factual information on the application of electricity and electrical apparatus to industrial processes and other manufacturing operations. The EEI Commercial Division General Committee gave its approval to the formation of this council, which in its initial stages will devote its activities solely to the field of electric heating.

Pooled Resources

Some 200 industrial concerns at Youngstown, Ohio, pooled resources and established the Youngstown Foundation, said J. R. David, Cleveland Electric Illuminating Co. Under the direction of a paid executive, the foundation publishes government procurement information and maintains a complete file of the production facilities of each member company. By offering government agencies the combined manufacturing potential of more than 200 plants, the foundation has magnified the impact which any single member could have hoped to make in bringing defense production contracts and defense production capabilities together.

Lighting in more than 85% of our industrial establishments is inadequate when judged by the recommended practices for good lighting, according to S. B. Williams, Sylvania Electric Products, Inc. A survey of industrial lighting in factory locations requiring a minimum of 50 ft-c, according to IES Recommended Practices, indicated that only 13% of these locations had as much as 45 ft-c; more than 60% had less than 20 ft-c, and more than one-third less than 10 ft-c.

Power Companies Can Help

Power companies are the logical agency to supply leadership, to become the organizers and to plan and administer a defense contract program, said D. L. Diehl, Pennsylvania Power & Light Co, because they are in an advantageous position to do the job most effectively.

Industry can cut materials-handling labor by 25% or approximately 1½ billion man-hours annually, according to Robert S. Rice of "Factory Management and Maintenance". One textile plant saves 480 man-hours each week with a chain conveyor system for handling yarn. The investment will be returned in 15 months, he said.

Approximately $500 Million has been spent for improved street lighting by the business-managed power companies in the five years since World War II, according to J. P. Rutherfoord of General Electric Co. One half billion dollars spent by private business in the public interest is a story worth telling and its telling should build credit with the public, he said.

Modern street lighting should be regarded as a commercial enterprise and not as a political tool and a benefit gift to the community, said E. B. Karns of Westinghouse Electric Corp. It is a salable commodity and can be converted into a profitable source of revenue by applying up-to-date merchandising principles successfully employed in the development of other load-building services.

•

Pacific Gas & Electric Grants 5.8% Pay Hike

Pacific Gas & Electric Co employees have been granted a 5.8% wage increase effective April 1 under one-year union contracts. The increase brings the total wage boost to 10% since September. At that time a 3% increase was granted and in January a 1% advance was made. More than 16,000 employes will be eligible for the increase, including those in supervisory and executive positions.

The contracts, with AFL International Brotherhood of Electrical Workers and CIO Utility Workers Union of America, cancelled existing contracts which had three or four months to go.

EEI-HOTPOINT AWARD for promoting sales of electric kitchens is presented to J. H. Keele, Florida Power & Light Co, by E. R. Taylor, Hotpoint sales mgr

Two Utilities Each Win 2 George Hughes Prizes

Florida Power & Light Co and Carolina Power & Light Co each carried off two of the ten George A. Hughes Awards for outstanding achievement in electric appliance sales and promotion presented at the 17th Annual Sales Conference of Edison Electric Institute in Chicago.

Detroit Edison Co, with 36,000 farm customers, received the Thomas W. Martin Rural Electrification Award. Although Detroit Edison's farm customers make up only 4% of total users, every farm in the company's service area had electricity available.

The Hughes Awards, sponsored by Hotpoint, Inc, consisted of five first place trophies, five second place plaques and money prizes totalling $2,400. They were awarded to the following companies for promotional activities in the following five fields:

Electric Kitchen Promotion: First Prize, Florida Power & Light Co; Second Prize, Potomac Electric Power Co.

Electric Range Activity: First Prize, Carolina Power & Light Co; Second Prize, Florida Power & Light Co.

Electric Water Heater Activity: First Prize, Kingsport (Tenn.) Utilities, Inc; Second Prize, Indiana & Michigan Electric Co.

Electric Dishwasher Activity: First Prize, Philadelpha Electrc Co; Second Prize, Central Arizona Light & Power Co.

Commercial Electric Cooking Activity: First Prize, Pennsylvania Power & Light Co; Second Prize, Carolina Power & Light Co.

BROWN COAL runs the generators of Yallourn, chief power station and briquette-making plant of the State Electricity Commission, Victoria, Australia. Field on which plant rests measures 40 sq mi and contains 6 billion tons of lignite. Present plant capacity is 175,000 kw, with 156,000 kw now under construction. Bottom, coal dredge in operation in open cut, now about 1 sq mi in area

Talks on Cooling Tower Problems Feature of ASME Spring Meeting

The importance of cooling towers in conservation and industrial re-use of water was a chief subject of discussion at the recent Spring Meeting of the American Society of Mechanical Engineers in Atlanta.

Economic factors concerning cooling tower designs vary greatly with location, water uses, materials and operations, A. R. LeBailly of Sargent & Lundy pointed out.

Howard E. Degler, technical director of Marley Co, Inc, Kansas City, Mo., said water crises arise because of over-population in cities, increased industrial and agricultural requirements, and the fact that consumption at the rate of 100 billion gallons a day is lowering the ground water reservoir, which has required centuries to accumulate. He concluded cooling towers were necessary to conserve water both from economic and natural resource factors. Improved tower designs have continuously reduced costs during the last 25 years and further improvement is looked for, he said.

Induced draft towers were favored against forced draft by Joseph Lichtenstein of Foster Wheeler Co because in discharging exhaust atmosphere at higher velocities a somewhat higher degree of safety against recirculation is achieved.

V. F. Estcourt, Pacific Gas & Electric Co, said there is an important relationship between turbine-leaving losses and optimum tower size. Performance must be considered in relation to combination of tower, condenser, and turbine. Scale deposition on the condenser tubes has presented a problem and use of chemicals, while correcting the condition, must be controlled for greatest effectiveness.

PG&E has designed a unique sulphur burning pot at low original and operating cost which is doing the job. It consists of pieces of 16-in. steel pipe 36 in. long with no bottom so that the sulphur came in direct contact with the ground, thus eliminating attack on the metal. Air is drawn into the pipe, and fumes go to the induced draft tower and are absorbed by water falling over the baffles.

The chemical treatment program has annually saved 500 million gallons of water in tower blowdown and has kept the condenser clean, Estcourt said.

•

9 Ohio Utilities Set Up Clearing House for Ideas

Nine Ohio utilities have set up a clearing house in Columbus to collect and exchange information of interest to the group. They have formed the Ohio Electric Utilities Institute and named J. B. Johnson, Ohio Public Service Co, manager-secretary, a full-time post.

Johnson said objectives include an interchange of ideas and information concerning problems of utility management and operation. Chief reason for formation of the institute, he said, is the increased demand for power to meet the nation's mobilization program. An engineering committee has already been set up to study power requirements of the charter members.

They are Columbus & Southern Ohio Electric Co, Ohio Edison Co, Dayton Power & Light Co, Ohio Power Co, Central Ohio Light & Power Co, Cincinnati Gas & Electric Co, Cleveland Electric Illuminating Co, Toledo Edison Co, and Marietta Electric Co.

•

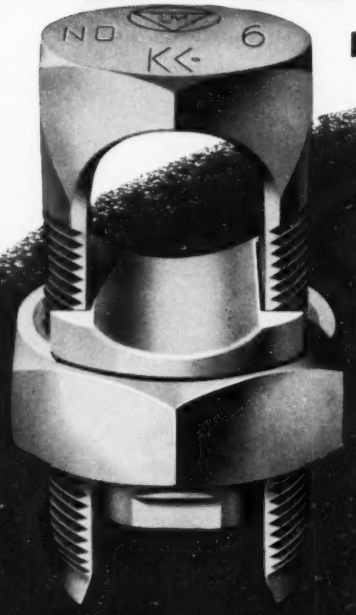
Plans 40,000-Kw Addition

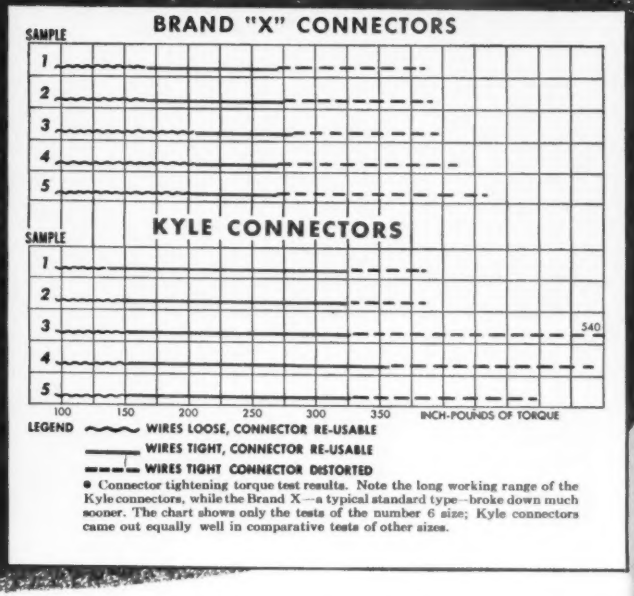
Empire District Electric Co, Joplin, Mo., plans to add a 40,000-kw unit to its Riverton Plant by 1953. High-pressure boiler for the new turbine generator will be designed to use coal, gas, or fuel oil.

TORQUE TESTS SHOW

KYLE Split-Bolt Connectors

HAVE A LONGER WORKING RANGE





● Connector tightening torque test results. Note the long working range of the Kyle connectors, while the Brand X—a typical standard type—broke down much sooner. The chart shows only the tests of the number 6 size; Kyle connectors came out equally well in comparative tests of other sizes.

For our own information, we put the squeeze on a bunch of connectors—with a torque wrench. The test chart shows the results.

Note the *long* working range of the KYLE connectors, and the much *shorter* range of Brand X—a typical, standard-quality connector that looks about like ours. That's valuable information for *any* connector purchaser.

HERE'S WHAT HAPPENS . . . *Some* connectors—but not KYLES—have rough threads. That means extra torque to turn the nut, extra strain on the connector body. Often the pad fits badly and goes a little skew-gee, requiring still more torque. Something has to give—the connector body takes the beating.

But heavy-bodied KYLE connectors have clean, accurately machined threads, smoothly rounded edges, a close-fitting pad. The nut tightens easily, the pad slides up smoothly, the force is on the wire—and the connector comes up without damage while still holding the wire much tighter.

COSTS LESS TO USE . . . A connector that can be used only once is an expensive connector. A connector that can be re-used is more economical. KYLE connectors work better, last longer, and, as the chart above shows, they'll stand lots more torque and still come up ready for re-use. That makes it obvious that you get better connections, and lower costs, when you get KYLES, the long-range, long-life connectors.

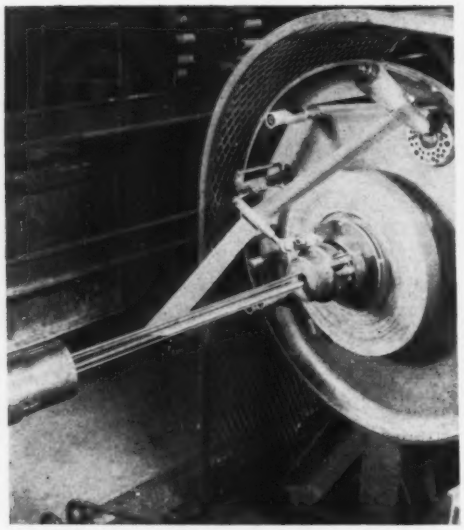
● If you want to save money with quality connectors, ask the L-M Field Engineer for samples and a copy of Bulletin SC1 which gives details. Or write Line Material Company, Milwaukee 1, Wisconsin (a McGraw Electric Company Division).

TIGHTENING TORQUES FOR SPLIT-BOLT CONNECTORS RECOMMENDED FOR BEST RESULTS

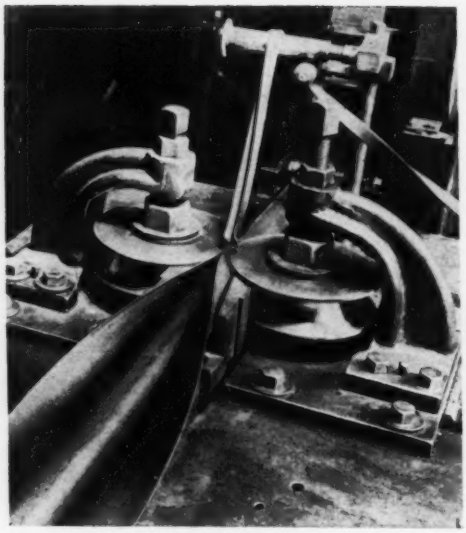
Connector size	Inch-pounds
8	75
6	225
4	275
2	350
2 stranded	400
1/0	500
2/0	600
4/0	750

2R

LINE MATERIAL Kyle Connectors



1 **COPPER CONDUCTOR** is wound with conducting neoprene tape to prevent internal corona cutting of insulation

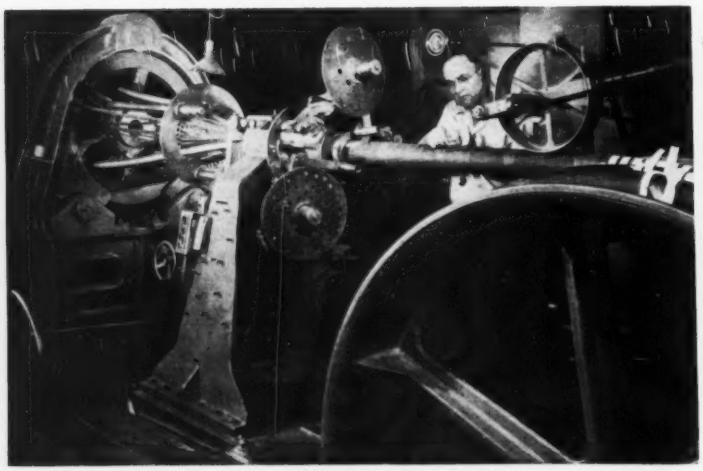


2 **UNIQUE STRIP INSULATING** process is used to apply last of eight strips of rubber around conductor

3 T g

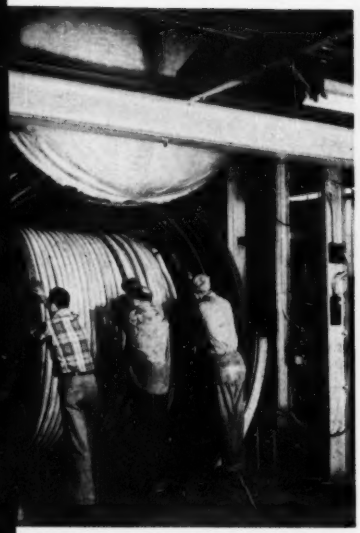
Single Length of Cable For 7 Miles of Sea

Two San Juan islands in Puget Sound v soon be receiving power from Bonnev Power Administration via the wor largest submarine cable (EW, April p 13). The three-conductor cable made in Paterson and Passaic (N. plants of Okonite Co. Picture se shows its fabrication over a five-mo period. It is 7½-mi long, 4-2/3 in.

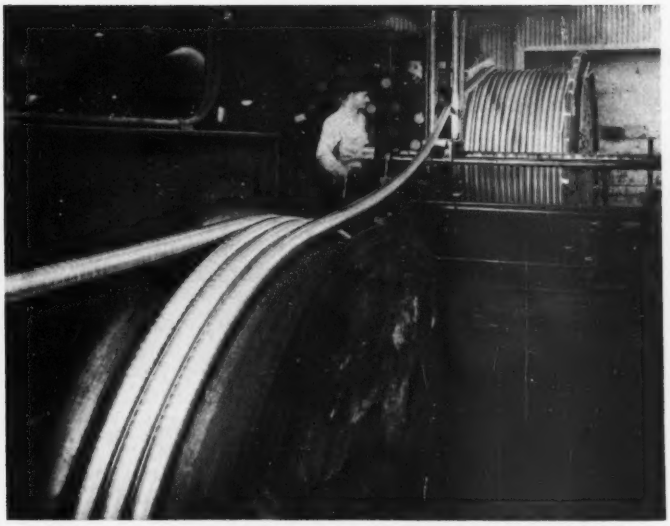


5 **WORLD'S BIGGEST** cabling machine twists three 2,300-ft lengths of single conductor together with cutched jute filler and a rubber-filled cable tape binder

6 **IN CONTINUOUS OPERATION,** quarter-inch, corrosion-resistar



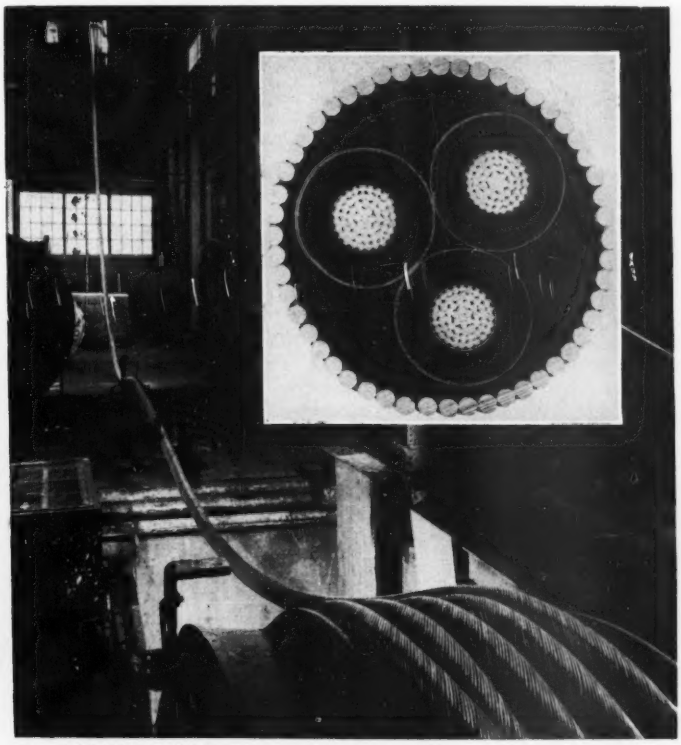
.TURE AND PRESSURE "cure" length of sin-ctor, which is then removed from vulcanizer



4 SHIELDING TAPE is applied in final Passaic step, and single conductor length is wound on steel drum for transfer to Paterson Plant for assembly of cable

diameter, weighs ¾ million lb and cost $500,000. Rated at 25 kv and capable of carrying 20,000 kva, the cable will be laid in two lengths under the sound, from Fidalgo Head, Wash., to Decatur Island and from there to Lopez Island. BPA will sell power to Orcas Power & Light Co, which serves the islands. Orcas now runs only a few low capacity plants.

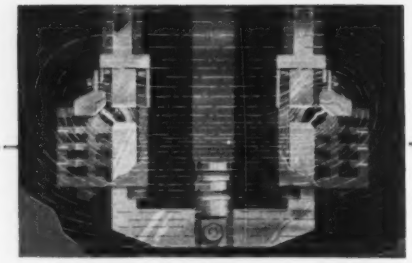
0,200-ft length is protected with layer of armor wires wound helically over core



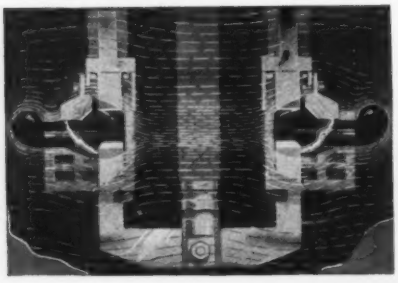
7 COMPLETED CABLE is run from armoring machine to capstan and lowered into 9-car train. Cross section: 3 conductors surrounded by insulation and armor

YOU CAN BE **SURE**.. IF IT'S

Westinghouse

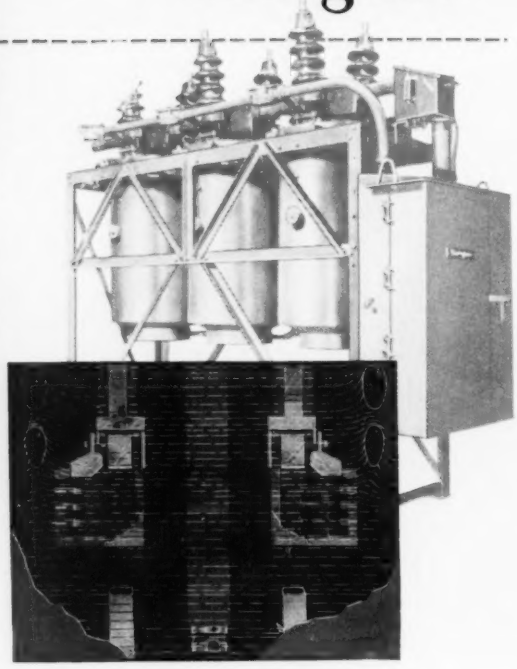


▲ Contacts partially open. The arc is lengthened by magnetic action and vaporizes oil. Upper arc terminal has transferred to arc horn.



▲ Deionizing action takes place. Un-ionized gas is directed through arc to extinguish it.

Arc completely extinguished. Fresh oil replaces gas in grids. Contacts fully opened. ▶



Exclusive "De-ion®" Grid Arc Control

CHECKS COSTLY OIL DETERIORATION!

Low arc voltage . . . low arc energy . . . these important advantages of "De-ion" Grid arc control assure greatly reduced oil carbonization and deterioration when you use Westinghouse Outdoor, Frame-Mounted Circuit Breakers. You save the cost of frequent oil replacement . . . you're sure of *improved* service continuity.

Rapid control of fault current is accomplished by vaporizing oil trapped in pockets. "De-ion" Grids quench the arc by magnetically forcing it into the grid, where oil provides a fresh flow of un-ionized gas. The dielectric strength is thus raised to a point where the arc cannot restrike. The effect of the "De-ion" Grids is graphically shown by the three progressive illustrations shown here.

Get the facts about all the cost-saving features of Westinghouse Breakers. Call your nearby Westinghouse representative, or write for booklet B-3686-A. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-60736

DESIGN TESTED AND VERIFIED IN THE Westinghouse HIGH POWER LABORATORY

Westinghouse

POWER CIRCUIT BREAKERS

WESTINGHOUSE

Interior to Ask Review of FPC Roanoke Decision

Department of Interior will ask the Fourth Circuit U. S. Court of Appeals in Richmond, Va., to review the Federal Power Commission's licensing of the Virginia Electric & Power Co to construct a project at the Roanoke Rapids site (EW, April 9, p 85).

Interior is expected to file a petition for review in Richmond before the expiration April 30 of the statutory 60-day period after FPC's denial of a rehearing.

The solicitor general has advised Interior that the department may bring the suit, because both parties are federal agencies.

•

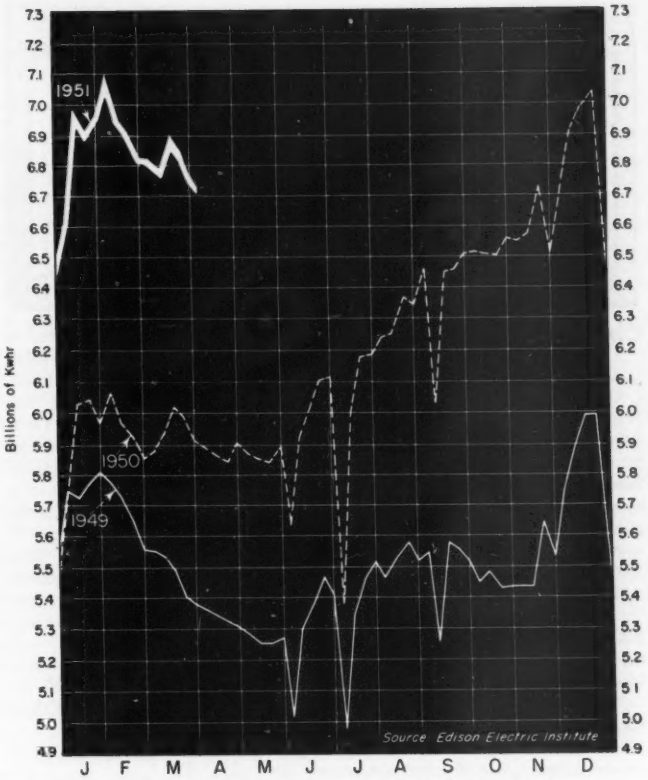
REA Promotes Clayton

Walter J. Clayton, assistant labor relations specialist in Rural Electrification Administration's management division, has been appointed acting director of the labor relations section. Clayton, who came to REA in 1949, succeeds Ralph A. C. Hill, who has been named a management division specialist to advise borrowers on Civilian Defense matters.

•

Named to Colorado PUC

John H. Winchell, a Denver attorney, has been appointed as a member of the Colorado Public Utilities Commission to fill the unexpired term of John R. Barry, who recently resigned.



Output Week Ended April 7—6,735,844,000 Kwhr

Weekly Output, Millions Kwhr

1951		1950		1949	
Apr 7	6,736	Apr 8	5,898	Apr 9	5,360
Mar 31	6,767	Apr 1	5,912	Apr 2	5,378
Mar 24	6,848	Mar 25	5,993	Mar 26	5,404
Mar 17	6,903	Mar 18	6,015	Mar 19	5,496
Mar 10	6,795	Mar 11	5,937	Mar 12	5,531
Mar 3	6,822	Mar 4	5,879	Mar 5	5,552
Feb 24	6,833	Feb 25	5,854	Feb 26	5,559
Feb 17	6,905	Feb 18	5,931	Feb 19	5,650
Feb 10	6,957	Feb 11	5,971	Feb 12	5,722
Feb 3	7,099	Feb 4	6,062	Feb 5	5,778

Percent Change from Previous Year

	Apr 7	Mar 31	Mar 24
New England	+13.6	+12.8	+12.3
Mid-Atlantic	+13.3	+10.8	+11.7
Central Industrial	+14.7	+14.5	+15.2
West Central	+11.7	+13.4	+13.5
Southeast	+13.6	+15.8	+17.1
South Central	+19.0	+19.7	+21.4
Rocky Mountain	+ 6.8	+ 9.7	+ 8.9
Pacific Coast	+17.7	+18.0	+12.4
Total United States	+14.2	+14.5	+14.3

MEETINGS

Michigan Municipal Utilities Association
Spring Meeting, Wenonah Hotel, Bay City, Mich., April 19-20.

Northwest Electric Light & Power Association
Engineering Section, Hotel Utah, Salt Lake City, Utah, April 25-27; Business Development Section, Multnomah Hotel, Portland, Ore., May 7-9; Personnel Section, Davenport Hotel, Spokane, Wash., May 16-18.

★**Edison Electric Institute**
Purchasing and Stores Committee Annual Conference, Lord Baltimore Hotel, Baltimore, Md., April 30-May 2; Transmission and Distribution Committee, Edgewater Beach Hotel, Chicago, May 1-2; Hydraulic Power Committee, Tapoco Lodge, N. C., May 3-4; Meter and Service Committee, jointly with Association of Edison Illuminating Companies' Committee on Metering and Service Methods, Huntington Hotel, Pasadena, Calif., May 7-9; Commercial Electric Cooking Conference, Sheraton Hotel, Chicago, Ill., May 9; EEI Accident Prevention Committee, Hotel Utah, Salt Lake City, Utah, May 21-22; Electrical Equipment Committee, Hotel Biltmore, Los Angeles, Calif., May 28-29; Annual Convention, Shirley Savoy Hotel, Cosmopolitan Hotel, Denver, Colo., June 4-7.

American Institute of Electrical Engineers
District No. 1 Meeting, Hotel Syracuse, Syracuse, N. Y., May 2-4; District No. 5 Meeting, Loraine Hotel, Madison, Wis., May 17-19; Summer General Meeting, Royal York Hotel, Toronto, Canada, June 25-29.

Pennsylvania Electric Association
Communications Committee, Bedford Springs Hotel, Bedford, Pa., May 3-4; Joint Meeting of Electrical Equipment, Transmission and Distribution Committees, Abraham Lincoln Hotel, Reading, Pa., May 10-11.

New Jersey Utilities Association
Spring Meeting, Seaview Country Club, Absecon, N. J., May 4.

American Public Power Association
Annual Convention, Read House, Chattanooga, Tenn., May 7-9.

New York Society of Professional Engineers
Engineering Industries Exposition, Hotel Statler, New York, May 10-12.

Missouri Valley Electric Association
Accounting Conference, President Hotel, Kansas City, Mo., May 17-18.

Public Utilities Advertising Association
Annual Meeting, Hotel New Yorker, New York, May 17-19.

Protective Relay Engineers
Annual Conference, Georgia Institute of Technology, Atlanta, Ga., May 18-19.

Missouri Association of Public Utilities
Annual Convention, Jefferson Hotel, St. Louis, Mo., May 21-23.

Pacific Coast Electrical Association
Annual Convention, Biltmore Hotel, Los Angeles, Calif., May 21-23.

American Society of Mechanical Engineers
Semi-Annual Meeting, Royal York Hotel, Toronto, Canada, June 11-15.

Canadian Electrical Association
Annual Convention, Algonquin Hotel, St. Andrews, New Brunswick, June 18-21.

American Society for Testing Materials
Annual Meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., June 18-22.

★ Addition this week

YIELDS (%) — Operating Electric Utility Securities

Quality	Bonds			Preferred Stocks			Common Stocks		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
DATE									
1951									
Apr. 5	2.88	2.94	3.03	3.96	4.22	4.52	5.50	6.22	7.09
Mar. 29	2.87	2.93	3.00	3.96	4.19	4.52	5.47	6.20	7.13
END OF QTR.									
4th 1950	2.65	2.67	2.78	3.86	4.14	4.51	5.80	6.54	7.44
3rd 1950	2.66	2.67	2.76	3.81	4.08	4.46	5.70	6.54	7.25
2nd 1950	2.68	2.66	2.74	3.79	4.03	4.38	5.38	6.51	7.50
1st 1950	2.59	2.61	2.74	3.78	4.01	4.36	5.22	5.85	6.67

Data: Reis & Chandler, Inc.

City Loses Suit to Block Competitor's Rate Cut

Oregon Public Commissioner George H. Flagg's order allowing Mountain States Power Co to reduce its rates in Springfield, Ore., to meet competition of that city's municipal system has been upheld by Salem's circuit judge. The court action dismisses a suit brought by the city to restrain the power company.

The judge ruled that the city has no legal right to be free from competition. He held that since the city, neither a customer nor stockholder of Mountain States Power, was not suing in behalf of the citizens of the city, it had no legal capacity to bring suit. The utility would have lost its customers in Springfield if it had not reduced its rates, the judge said.

•

SEC Issues New Index on Common Stock Prices

The Securities and Exchange Commission has devised a new stock market index which will be published every Monday. The index will be based on the weekly closing market prices of 265 common stocks listed on the New York Stock Exchange.

The commission believes that its new index will be one of the most accurate because it will be published weekly allowing more time for weighting and for using a larger number of stocks as a base.

The 265 stock issues comprising the index are classified into 29 industry groups under five major groupings: Manufacturing, subdivided into durable and non-durable; transportation; utility; trade, finance and service; and mining. A composite figure for all industries also will be given.

For use in the index SEC statisticians selected shares that covered at least 65% of the volume and value of all trading in an industry during 1949. Each component stock was weighted by the number of shares outstanding. The weekly closing price of each share is booked and the sum for all issues expressed as a percent of a base value. The base chosen was the full year of 1939.

Weekly indexes are available from January, 1949 to the present and the average weekly indexes for the years 1940 through 1948.

•

CEI's Offer to Buy Plant Accepted by Berea, Ohio

Cleveland Electric Illuminating Co's offer of $805,000 for the 6,000-kw municipal plant of Berea, Ohio, has been accepted by the city council. However, the date when CEI will begin supplying Berea with power is indefinite because of a taxpayers' suit seeking to block the sale. It is not known whether a lower court's verdict against the plaintiffs will be appealed.

Included in the purchase is all generating and distribution equipment but not the buildings and land owned by the municipal company.

FINANCIAL BRIEFS

Colorado Central Power Co, California-Pacific Utilities Co, and Mountain States Power Co have joined the trend toward stock splits. Colorado Central is converting each of its $10-par common shares into two shares with a par value of $5. Authorized shares were increased from 100,000 to 500,000. California-Pacific has issued two $10-par shares for each $20-par share outstanding. Each preferred share will get two votes and each new common share one vote. Mountain States converted each no-par common share into three shares of $7.25-par stock. Houston Lighting & Power Co stockholders will vote April 18 on a proposed three-for-one split.

Minnesota Power & Light Co, Duluth, has been authorized by the Federal Power Commission to acquire 14,000 shares of $100 par value common stock from its subsidiary, Superior Water, Light & Power Co. Proceeds will be used to finance Superior's construction program.

Stockholders of Link-Belt Co have approved a two-for-one split of the company's common stock. The new issue would number 1,651,348 shares outstanding with a par value of $5. At present there are 825,674 no-par shares outstanding.

Gov Thomas E Dewey of New York has approved a bill allowing villages having a population of 5,000 or more to impose a special local tax of not more than 1% on the gross income of utilities. First class villages in the state already have such a tax privilege.

Electric Utility Financing—March 31-April 7

Company	Description	Amount of Offering (000)	Offering Price	Yield at Price to Public
Bonds				
Potomac Edison	1st mtg and coll tr 3¼s, 1981 new money	$10,000	101.421%	3.30%
Worcester County Electric	1st mtg "B", 3¼s, 1981 new money	12,000	101.54	3.17
Preferred Stock				
Wisconsin Power & Light	10,000 sh 4.80% ($100 par) new money	1,000	100.00	4.80
Common Stock				
Southern Co	1 million sh new money	11,375	11.375	7.03
Duke Power	126,255 sh new money	9,469	75.00	5.33
Oklahoma Gas & Electric	215,380 sh new money	4,254	19.75	6.58
Wisconsin Power & Light	96,069 sh new money	1,566	16.30	6.87

SCHEDULED FOR FOLLOWING WEEK

Bonds—Mountain States Power, 1st mtg, 1981 refunding and new money, $5.5 million.
Common Stock—Mountain States Power, 150,000 sh new money, $1.5 million.

IN THE INDUSTRY

KEN KOST

Does the term "net margin" mean anything to you? If you are president of an electric utility, the head of an operating public power project, or an executive in any branch of the industry, you better become familiar with it. Simply defined it is the reserve that an operating utility has after allowing for its normal operating and maintenance reserve. It is a super-reserve—a reserve above normal.

The term was first used by the Defense Electric Power Administration in its recent report to Congress (EW, April 2, p 80). It is a new idea in industry thinking. For years reserve has been the extra capacity (or capability) left over or above demand figured at peak load. But these are no longer normal times. Another indicator of the strength of the industry was needed. This new indicator is called "net reserve margin" by Depa.

"Margin" Is Important in Locating New Industries

To Depa "margin" is most important. Here is the reason. Depa's main job is to see that the nation's many mobilization industries can get all the electric energy they need. Many of these new industrial loads are extremely high. For some like those of the Atomic Energy Commission they are fantastically high—perhaps 2 million kw or more. Loads such as these cannot be supplied by any utility—whether investor or publicly owned—out of the accepted normal reserve of 15% or less. New plants must be constructed to carry them. But smaller loads, 10,000 kw to 50,000 kw, can be spotted in areas where there are "margins."

It is well to remember that Depa is staffed not by fanatical theorists but by some of the best "brains" in the industry. What is even more important is that these men have the confidence and cooperation of the industry. They are not trying innovations. They just want to do a good job. But their contribution of "margin" to the industry's vocabulary may live longer and have more far reaching effect than any rulings or orders that they may hand down.

"Margin" Concept Might Be Good One

"Margin" can be a temporary term. It may pass from the scene with Depa. But perhaps it would be better for it to survive. "Margin" can end once and for all the term "power shortage." There never has been a "power shortage" in the sense that a company has been unable to supply the normal "growing needs" of its regular customers. Practically every utility can handle a 5%-per-year load growth for time evermore. It has been the failure of operating companies to supply, on top of this normal load, extraordinary industrial loads, which could not be foreseen by anybody but the Lord, that has given the excuse for the cry, "power shortage." This charge has always been a bit absurd—just like saying that there is an ice cream shortage because the "corner store" can't supply 50 gal of chocolate ice cream at a moment's notice.

But if the government is going to expect utilities to carry "margin" as a defense measure, their stockholders and customers should not be penalized as a result. A "margin" of 10% in addition to a normal reserve for operation and maintenance of 7.5% (approximately the percentage of reserve to capacity given in Depa's report) can be quite costly. In all fairness the "marginal" facilities should be tax free at local, state, and national levels. Perhaps, the federal government should also pay the interest on the money invested in these extra facilities or else supply the money itself.

If this new concept of necessary capacity is adopted, it will do much to assure the security of the nation—something like stockpiling electricity. And supplying the necessary facilities will keep manufacturers of heavy electrical apparatus busy for at least the next ten years.

Perhaps, Depa has started something.

TECHNICAL NOTES

ARCHER E. KNOWLTON

(Adapted from papers and discussion at recent National Association of Corrosion Engineers convention in New York.)

Ac electrolysis is a dubious thing; those who believe it exists attribute the apparent anomaly to the rectifying characteristics of soils or surface oxides.

Superposed ac may contribute to electrolysis, some feel, since the dc creates dissymetry in displacing the ac zero; one big utility has never identified ac electrolysis, however.

Earth magnetic disturbances may disrupt cathodic protection for hours by fluctuating wildly from 1½ v or more plus to as much minus for each 100 miles of north-south metallic circuit.

Cinders against a buried steel pipe will require inordinate amount of cathodic current for protection; better remove sulphurous cinders from such contact.

Economics may prevent full cathodic protection but 0.85 v is a good potential difference to aim for and maintain.

Inhibitors are available for fuel oils to prevent internal corrosion of storage tanks.

Potential in a soil corrosion cell originates at the contact surface between the metals and electrolyte, it is believed; that is the place to insert resistance or neutralization.

Cathodic protection voltages in excess of 1.1 may be detrimental and even lift off protective coatings.

Protective ground beds of carbon or graphite give longer life if backfill is kept porous, ie minimum of fines.

Location of electrodes in cathodic protection testing is one of the major unsolved problems of corrosion prevention.

Modified enamels have promise as corrosion deterrents, but to be successful they must offer minimal penetration.

NEWS ABOUT PEOPLE

George A. Donald Heads Lake Superior Power

George A. Donald has been elected president of Lake Superior District Power Co, Ashland, Wis., to succeed Walter J. Hodgkins, who was elected chairman of the board.

Donald, a member of the board

G. A. DONALD

since 1935, served as vice president from 1939 until he was named executive vice president in 1947. From 1938 to 1947 he was also vice president and director of Michigan Gas & Electric Co and from 1947 to 1950, its executive vice president. He has also served as vice president and director of Albion Gas Light Co and Copper District Power Co.

He joined Lake Superior as a storekeeper in 1920 and from 1926 to 1936 served as general superintendent of the Northern Division of MG&E, a Lake Superior subsidiary.

•

Albert J. Allen, meter engineer for Consolidated Edison Co of New York, has retired after 30 years of service with the utility. Allen served on the Meter Committees of Edison Electric Institute and Association of Edison Illuminating Companies for 28 years. He edited and partly wrote the "Electrical Meterman's Handbook" covering the years 1923-40 and also contributed articles on meters to magazines including "Electrical World." Allen's career in the meter field began in 1902 with Brooklyn Edison Co as meter tester's helper. He joined the New York State Public Service Commission in 1907 and later became chief inspector of electrical meters. Allen left the commission in 1921 and started work for United Electric Light & Power Co as superintendent of meter and test. After the Con Ed mergers of 1936 he became meter engineer of the company's electrical engineering department. Allen was elected an AIEE fellow last year.

•

Westinghouse Advances Cheney and Plishker

Westinghouse Electric Corp has made several changes in its Lamp Division. Harold G. Cheney, sales executive for the company for 21 years, has been named lamp sales administrator. Herbert E. Plishker, manager of advertising and sales promotion for the division, has been appointed manager of lamp sales.

In his new position Cheney will establish marketing plans and will direct the administrative procedures of the Lamp Division's sales, commercial engineering, and advertising departments. He will continue to make his headquarters in Bloomfield, N. J., where he has been assistant manager of general lamp sales since 1948.

Plishker will direct the activities of the lamp district sales managers in nine cities and also of various product sales managers at Bloomfield. He succeeds Russell E. Ebersole who now is in charge of all commercial activities for the Lamp Division.

Cheney started with Westinghouse in 1920 as an accountant in the lamp engineering department. Later he moved to the advertising and sales promotion department and became a member of the executive sales staff in 1930.

Plishker joined the company in 1927 as a lamp advertising copywriter. He became assistant advertising manager of the Lamp Division in 1930 and manager of advertising and sales promotion eight years later.

Prezzano and Scofield Become Con Ed VP's

Edward P. Prezzano and L. A. Scofield have been elected vice presidents of Consolidated Edison Co of New York and will direct its Westchester Division. They were president and vice president, respec-

E. P. PREZZANO

L. A. SCOFIELD

tively, of Westchester Lighting Co and Yonkers Electric Light & Power Co before these two subsidiaries were merged with Con Ed.

Frank J. Bischoff, formerly vice president and director of the Westchester companies, has been made an assistant vice president of Con Ed.

Prezzano joined Westchester Lighting as secretary in 1924 and later was elected vice president of Yonkers Electric Light & Power and Bronx

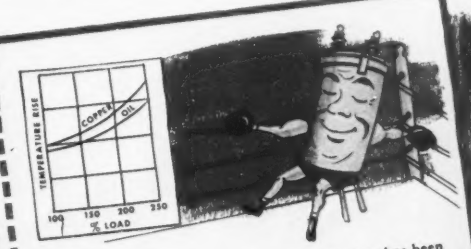
(*Continued on page* 27)

The Lightweight Champ!

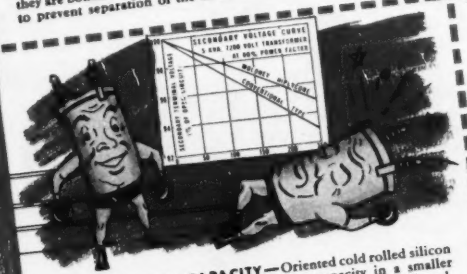
He's a real champ! No managerial headaches about maintenance costs . . . they're practically nil with "Hi". His performance record is unexcelled . . . and what's more . . . he's a natural lightweight which means less strain on his handlers. These facts, together with an ample, superior circulatory system that makes him cooler and more rugged under fire all add up to the lightweight champ . . . "Hi" HiperCore.

The Reasons

HIGH SHORT CIRCUIT STRENGTH—Securely braced coils, made mechanically rigid with heat-curing bonding materials, enables "Hi" to withstand the most severe mechanical strains under short circuit conditions. Shifting or distortion of his windings is prevented, thus eliminating insulation abrasion. You can't damage his cores with short circuits either because they are bonded together with a force of several thousand pounds to prevent separation of the laminations.



SURGE PROTECTION—"Hi's" superior design has been surge-proved on Moloney's 2,500,000 volt surge generator with impulse tests well in excess of minimum requirements. In order for "Hi" to surge-prove at the high level that he does, he has properly distributed insulation, has had air and moisture pockets removed by vacuum treatments, and has a superior oil of very high dielectric strength. A higher factor of safety is the result.



HIGH OVERLOAD CAPACITY—Oriented cold rolled silicon steel cores permit greater flux carrying capacity in a smaller mass. Extensive use of cooling ducts results in more rapid cooling of the cores and windings, thus achieving a lower hottest spot temperature gradient. Because of this "Hi" HiperCore can, without damage, carry peak overloads that would greatly shorten the life of ordinary transformers which might operate satisfactorily at normal loads.

HiperCore

YOU BE THE JUDGE . . .

Check these features against them all. You'll be sure to come up with the decision that HiperCore is the lightweight champ!

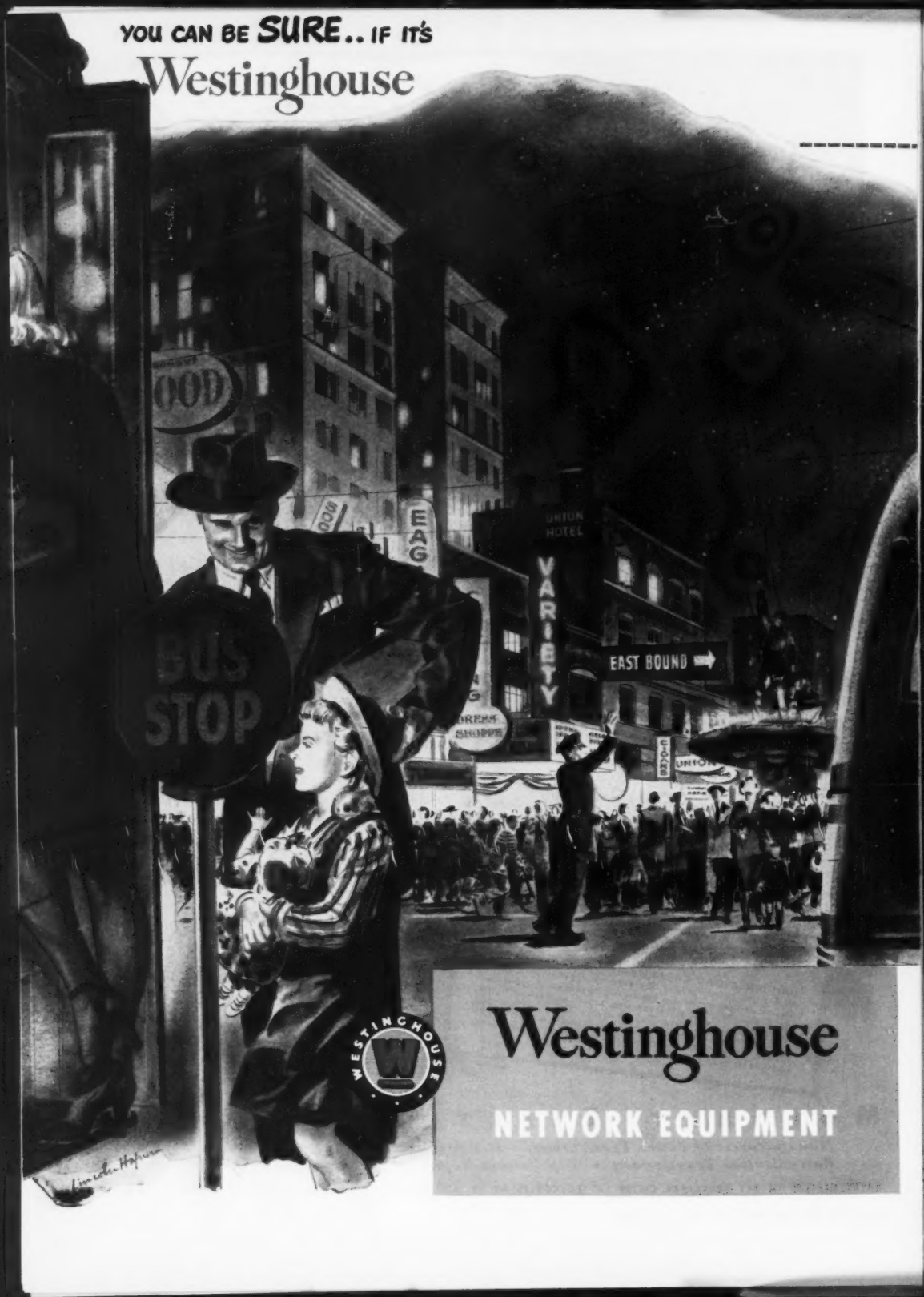
- **Long Operating Life**
- **High Factor-of-Safety in Design**
- **Light weight**
- **Small size**
- **Better Voltage Regulation**
- **Superior Tap Changer**

MED1-6

MOLONEY ELECTRIC COMPANY

Manufacturers of Power Transformers • Distribution Transformers • Load Ratio Control Transformers • Step Voltage Regulators • Unit Substations

SALES OFFICES IN ALL PRINCIPAL CITIES • FACTORIES AT ST. LOUIS, MO. AND TORONTO, ONT., CANADA


YOU CAN BE SURE.. IF IT'S
Westinghouse
BUS STOP
VARIETY
EAST BOUND
UNION HOTEL
WESTINGHOUSE
Westinghouse
NETWORK EQUIPMENT

NOW is the time...
SECONDARY NETWORKS PAY!

Sixty-four per cent of the cities in the 100,000 to 250,000 population range enjoy the dependability and flexibility of secondary network systems! In larger cities the figure is 95 per cent! This is overwhelming proof of acceptance... and it is evidence of widespread action on this basic premise:

Growing loads can be handled most economically by switching to a secondary network system now!

Yes, the sooner you make the switch, the better, for never again will you have an opportunity to make the changeover as cheaply as you can *today!* You'll have less investment in stopgap equipment... a less expensive revamping job...a head start in secondary network savings.

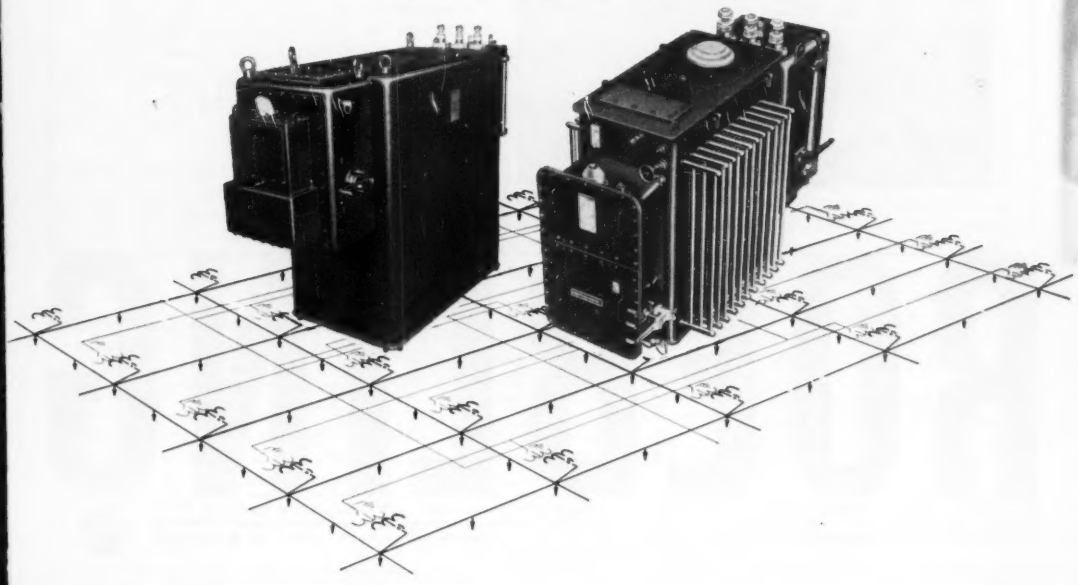
For medium-sized cities, secondary networks provide so high a degree of flexibility that load forecasting is no longer a major concern. Extensions, load shifts and load growth can be accommodated economically... layouts simplified... less and better co-ordinated equipment used. Operating costs go down... revenues and profits up!

As you plan your secondary network, look to Westinghouse for the equipment you'll need. Our complete, correlated line of network equipment includes the right transformers and protectors for all types of load areas.

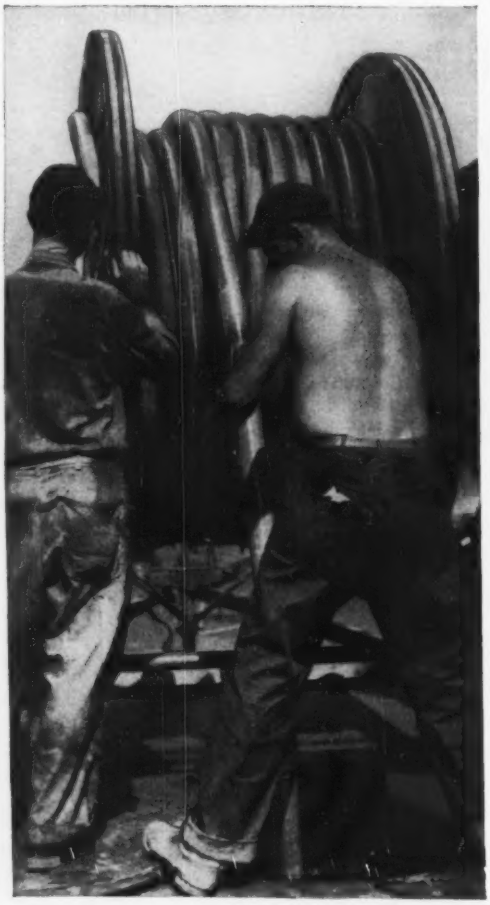
Booklet B-4002, "A-C Secondary Network Systems", contains complete information. And remember... our complete facilities, engineers and calculating boards are available to help you with your network planning. Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa.

J-97144

Westinghouse Standardized Network Transformers... from liquid-filled units to submersible dry-type units ...match any degree of underground or overhead service.



PAPER INSULATED CABLE



For unsurpassed performance . . . low-cost service . . . ROEBLING!

FOR UNDERGROUND TRANSMISSION, distribution and service circuits, there are no finer cables than Roebling Paper Insulated Lead Encased. Manufactured to your individual specifications, or to specifications adopted as standard by leading associations of power cable engineers, Roebling materials, methods and precision control assure completely dependable products and long service economy.

Roebling Shielded Type H is an outstanding selection for 3-phase grounded neutral circuits from 13 to 33 kv. It is made in single and multiple conductor construction, in concentric round or Compack strand (round or sector). Where the cable will be exposed to electrolysis or corrosion, the lead sheathing can be given an outer non-metallic protective jacket of ROESHEATH (NEOPRENE) or Polyethelone.

A large share of Roebling's complete wire and cable line is required in the rearmament program, but the Roebling organization will always do everything possible to meet your service and delivery needs. John A. Roebling's Sons Company, Trenton 2, New Jersey.

ROEBLING

Atlanta, 934 Avon Ave ★ ***Boston,*** 51 Sleeper St ★ ***Chicago,*** 5525 W. Roosevelt Rd ★ ***Cincinnati,*** 3253 Fredonia Ave ★ ***Cleveland,*** 701 St. Clair Ave, N.E. ★ ***Denver,*** 4801 Jackson St ★ ***Houston,*** 6216 Navigation Blvd ★ ***Los Angeles,*** 216 S. Alameda St ★ ***New York,*** 19 Rector St ★ ***Odessa, Texas,*** 1920 E. 2nd St ★ ***Philadelphia,*** 230 Vine St ★ ***San Francisco,*** 1740 17th St ★ ***Seattle,*** 900 1st Ave, S. ★ ***Tulsa,*** 321 N. Cheyenne St
Export Sales Office, ***Trenton, N. J.***

News About People

(*Continued from page 22*)

Gas & Electric Co. He became president of Westchester Lighting and the Yonkers company in 1936.

Scofield joined New York Edison in 1912 as an assistant tester. He worked his way up through the ranks and became Con Ed general distribution manager in 1941. Later he was appointed general sales manager and assistant vice president. In 1948 he was elected vice president and director of the Westchester and Yonkers companies.

Bischoff began his utility career in 1903 with Consolidated Gas Co in the accounting department. Later he worked for Astoria Light, Heat & Power Co. He became controller of Con Ed and in 1946 was appointed a vice president of the Westchester and Yonkers subsidiaries.

Other Westchester and Yonkers utility executives elected officers of Con Ed are John P. McLoughlin, assistant controller; Carl L. Carlson, assistant treasurer, and Frank M. Nilan, assistant secretary.

•

Ross M. Barteaux has been named general superintendent of the light and power department of Nova Scotia Light & Power Co, Halifax, N. S. He has been assistant general superintendent. Barteaux was with Stone & Webster Corp, Boston, before going to the utility in 1929. He succeeds **J. J. Doolan,** who had been general line foreman and then general superintendent for 31 years.

Howard R. Cressman has been elected assistant secretary of the Philadelphia Electric Co. He succeeds P. A. Wilson who will retire after 50 years service with the utility. Cressman has been with Philadelphia Electric since 1911.

Dr Karl T. Compton, chairman of the corporation of Massachusetts Institute of Technology, is the first winner of the $1,000 William Procter prize for scientific achievement given by the Scientific Research Society of America. Compton was chosen for his scientific research, his administration as president of MIT in 1930-48, and his service on many national committees concerned with research.

Northern States Power Promotes Hibbert Hill

Hibbert M. Hill has been appointed chief engineer of Northern States Power Co, Minneapolis. In this newly created post he will be in charge of all engineering and design activities.

Hill joined the company in 1941 as hydraulic engineer. From 1942 to

H. M. HILL

1945 he served as an officer in the Corps of Engineers, U. S. Army, supervising design of cantonments and airfields. Since his return to NSP he has been in charge of coordinating construction of six steam plants and a hydro plant.

•

M. G. Miller, formerly assistant comptroller of West Penn Power Co, has been appointed assistant vice president of the West Penn Electric Co of New York, and **Donald M. Kammert,** formerly assistant comptroller of West Penn Electric Co, has been made comptroller of West Penn Power Co. Miller has been with West Penn Power since 1922, and was made assistant comptroller in 1939. Kammert joined the American Water Works & Electric Co, then the parent company of West Penn Electric and West Penn Power, and was appointed assistant comptroller of West Penn Electric in 1948. In addition to his duties with West Penn Electric, Kammert has been an assistant secretary and an assistant treasurer of West Penn Power since 1946.

Clifford R. Beardsley, director of the industrial and economic development department of Consolidated Edison Co of New York, Inc, has retired after 27 years of service. Beardsley joined Brooklyn Edison Co, later merged into Con Ed, in 1923 as superintendent of electrical construction. Later he became superintendent of distribution. With Con Ed he became manager of the contract control and inspection department in 1938. Since 1946 he has headed the company's industrial and economic development activities. Before joining Brooklyn Edison he worked for General Electric Co in New York and New Haven, Conn; United Illuminating Co, Bridgeport, Conn.; and Fred T. Ley & Co, Springfield, Mass.

Noel B. Hinson, vice president and executive engineer of Southern California Edison Co, has retired after 44 years of continuous service. He will retain his post as chairman of the Pacific Southwest Power Interchange Committee. Hinson joined the utility in 1906 as a testman in the Los Angeles test department, became distribution engineer in 1913 and planning engineer and chairman of the company's planning committee in 1923. He initiated a system of analysis of population and load growth in relation to system requirements still in use. Later he became assistant manager of operation, chief engineer, and executive engineer before being elected a vice president in 1945. He is a director of the American Institute of Electrical Engineers.

OBITUARY

E. D. Harrington, 54, head of mobilization activities of the Small and Medium Motor Divisions of General Electric Co, died at Schenectady April 1. Harrington joined GE in 1919 as a student engineer, serving first as an industrial engineer and later as a commercial engineer. In 1941 he was appointed sales manager of the air-conditioning and commercial refrigeration department. He was named to the defense mobilization post several months ago.

L. E. Brown, vice president and general manager of Central Illinois Light Co, died March 31 at Peoria. He had been with the company since 1933.

Charles W. Ingraham, 60, engineer for Gulf States Utilities Co, died recently at Beaumont, Tex.

MANUFACTURERS and MARKETS

Allis-Chalmers Profits Up in 1950, Sales Down

Profits of Allis-Chalmers Manufacturing Co in 1950 were well ahead of those in 1949 although total sales billed were less than in 1949.

The company reported 1950 profits at $23,119,853 as compared with $18,755,461 for the previous year. Total sales billed in 1950 amounted to $343,698,400 compared with $351,097,878 in 1949.

Earnings were equal to $8.72 a common share after preferred dividends of $1,176,996. In 1949 the profit was $6.99 a share.

Unfilled orders in the general machinery division increased from $97,342,031 on Jan. 1 to $126,158,450 on Dec. 31, 1950.

The division of the 1950 sales billed and other income totaling $345,399,277 is: Materials and operating expenses, $191,362,965 or 55.4%; wages and salaries, $100,593,706 or 29.1%; all taxes $30,322,753 or 8.8%; retained for working capital, $13,774,486 or 4%; and dividends, $9,345,367 or 2.7%.

•

Motor Course Prepared by General Electric Co

General Electric Co has prepared a new educational program designed to aid in the rapid training of industrial personnel in the selection and application of modern electric motor drives. It is the fifteenth in the company's "More Power to America" series.

The program will be distributed in April to GE district offices throughout the country for showings to users and potential users of electric motors, application engineers, power sales engineers, machinery manufacturers, designers, contractors, consulting engineers, and students.

Feature of the program is a Motor Selection and Application Course. It consists of nine 35-mm black-and-white slidefilms, student review booklets on each lesson, and an instructor's manual. The course has been prepared so that any competent engineer can teach it. Its aim is to show how to select the right motor for any job. Specifically, it instructs by showing how motors operate, what types are available, and how to select and apply the right motor from these types.

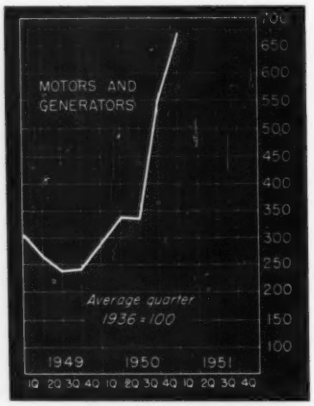
The slidefilms, manuals, and booklets may be purchased from the General Electric Co, Schenectady, N. Y.

•

Motor, Generator Orders Continue Sharp Climb

Orders received for motors and generators kept on skyrocketing in the fourth quarter of 1950.

The index compiled by the National



Electrical Manufacturers Association rose to 674 in the final quarter, 22% above the third quarter's 551. The fourth quarter index was 186% above the figure for the same period in '49.

•

Zinc Scrap Regulated

National Production Authority has told zinc scrap dealers they cannot accumulate inventories in excess of a third of the tonnage of zinc scrap they received in the first half of 1950. From now on dealers will have to receive prior authorization from NPA to send their scrap out for conversion to other forms while still retaining title to that scrap.

MANUFACTURING BRIEFS

Westinghouse Lamp Division has bought 3½ acres in Farmers Branch near Dallas, Tex., to build a warehouse with room for nine million light bulbs. Raymond K. Leonard, manager of the Texas lamp sales division, will move his headquarters to Farmers Branch when the new building is completed next summer.

Euclid, Ohio, has passed a city ordinance requiring new homes to be equipped with electric food waste disposers or gas incinerators. The move was taken to secure better health advantages for the citizens and to save the city money on the collection of garbage.

A new wood preservative, copper 3-phenylsalicylate, has been developed by the Dow Chemical Co, for special uses in the wood preservation field.

San Francisco headquarters of J. H. Baxter & Co, Western producer of pressure-treated forest products, have been moved to the Standard Oil Building at 200 Bush St. The move was necessitated by the expansion of Baxter's business following the acquisition of a large new wood preserving plant at The Dalles, Ore. The plant, leased from the Union Pacific Railroad Co, will be operated by an affiliated company, the Baxco Corp.

General Electric Co will construct a $15-million plant near Utica, N. Y., for the manufacture of electronics equipment. The plant, to be operated by the Commercial Equipment Division, will employ approximately 2,500 persons to make electronics equipment for military purposes. GE has two other plants in Utica.

Richardson-Allen Corp, 116-15 Fifteenth Ave, College Point, Long Island, N. Y., has incorporated a Canadian company to manufacture its line of rectifiers and other electrical equipment for that market. Kergen Wells,

secretary, will direct operations of the Canadian company, Richardson-Allen of Canada, Ltd, 370 Victoria St, Toronto.

The St. Louis plant of Joseph T. Ryerson & Son, Inc, steel distributors, will be rebuilt and enlarged. Additional warehouse space totaling 50,000 sq ft will be constructed.

A new monthly newspaper for dealers is being published by Hotpoint, Inc. The Hotpoint "Headliner" will give information on company activities, products, service, economic conditions, and other aspects of the appliance business.

SALES ASSIGNMENTS

COMPANY STAFFS

Brown Instruments Division of Minneapolis-Honeywell Regulator Co, Minneapolis, has assigned three new industrial managers to its field staff. Joseph H. Matulis has been made industrial manager of the Chicago branch, Willard Smith of the Pittsburgh branch, and Joseph H. Bowman of the Buffalo office.

Swartwout Co, Cleveland, has opened a new sales office at 836 Michigan Theatre Bldg in Detroit. Director of power plant equipment Sales for the new office serving southeastern Michigan is Kenneth P. Hengesbach, formerly of the Philadelphia office.

R. E. Uptegraff Manufacturing Co, Scottdale, Pa., has named H. W. Petty manager of its newly opened Pittsburgh sales office. Petty joined the company last year after serving with Corbone Corp, Wagner Electric Co, Holtzer Cabot Co, and Koppers Co.

Westinghouse Electric Corp has made Edward C. Delano manager of the New England district to succeed L. E. Lynde, recently elected a vice president and transferred to Washington. Delano has been with Westinghouse for 30 years. Since 1933 he has been industrial manager for the New England district.

Graybar Electric Co, New York City, has made W. E. Guy, who has been Chicago district sales manager, assistant district manager. L. C. Esthus, Des Moines branch manager, will succeed Guy, and D. M. Hitchcock will be transferred from San Francisco to Des Moines to replace Esthus.

Metal Prices
April 9, 1951

COPPER, Conn. V., lb	$ .24½
LEAD, N. Y., lb	.17
ZINC, prime Western, E. St. Louis, lb	.17½
TIN, Straits, quot., N. Y., lb	1.50
ALUMINUM, ingot, base price	.19
NICKEL, base price	.50½
STEEL, billets, Pitts., ton	56.00
STEEL, scrap, No. 1 heavy, Pitts., ton	45.00

NEW ELECTRICAL CONSTRUCTION

A weekly selection of U. S. electrical construction projects announced by private and government utility systems involving more than $70,000. Also listed are major industrial and construction jobs where electrical work is indicated or implied

UTILITIES

Proposed Construction

Arkansas—U. S. Eng., 300 Broadway, Little Rock, Ark., furnish main control switchboards, etc., Serial No. CIVENG 03-05-51-47.

California—Southern Counties & Southern California Gas Co., 810 S. Flower St., Los Angeles, (selected list bidders) natural gas transmission line, install only 23 mi. 30 in. and 21 mi. 22 in. steel lines, to serve Santa Monica, West Los Angeles, and San Fernando Valley. $2,365,000.

Calif., San Francisco—Public Utilities Comn., City Hall, constr. Cherry Valley 22 KV power line.

Colo., Boulder—U. S. Atomic Energy Comn., Los Alamos, N. M., special research laboratory on sect. Natl. Bureau Standards Grounds near here, $1,800,000. Sterns-Rogers Mfg. Co., 1720 California St., Denver, Colo., consult. engr. and archt.

Iowa—Allamakee-Clayton Electric Cooperative, Postville, sys. imprvs., headquarters facilities, two way radio and completion of previously approved construction, Allamakee Co. $115,000. Brown Eng. Co., K. P. Bldg., Des Moines, Ia., consult. engr.

Missouri—Intercounty Electric Co-operative, Licking, 388 mi. rural distr. lines, 21 mi. changes, Dent, Phelps, Shannon and Texas Counties. $500,000. Frank Horton & Co., Lamar, engrs.

New Mexico—Bureau Reclamation, Dpt. Interior, Bldg. 1A, Denver Federal Center, Denver, Colo., control boards, carrier-current transmitter-receiver equipment, supervisory control and telemetering equipment, distr. boards and battery chargers for Willard, Albuquerque, Belen, Central, and Las Cruces, Spec. No. DS 3374.

N. Y., New York—Dpt. Pub. Wks., Municipal Bldg., Zone 7. Contr. 1, demolition, general constr. work; elevators and dumbwaiters, metal equip. top soiling and planting; Contr. 2, heating and kitchen equip.; Contr. 3, heating, ventilating, air-conditioning, refrigerator work; Contr. 4, electrical and lighting fixtures for the Nurses' School and Residence, at Bellevue Hospital. Plans deposit $50 Contr. 1, $25 each Contrs. 2, 3, and 4.

North Dakota—Bureau Reclamation, Dpt. Interior, Bismarck, N. D., construction Bismarck-DeVaul 69 kilovolt transmission line, Transmission Div., Missouri River Basin Proj., near Bismarck, Spec. No. DC-3373.

O., Cincinnati—U. S. Atomic Energy Comn., 70 Columbus Ave., New York 23, N. Y., uranium ore refinery and other facilities to produce uranium feed materials on Miami River 9 mi. northwest of here. $30,000,000. Catalytic Constr. Co., 1528 Walnut St., Phila., Pa., consult. engr.

Pa., Millersville—General State Auth., 18 and Herr Sts., Harrisburg, electrical distr. sys.; and other utilities, separate bids, mechanical, electrical at Millersville State Teachers College. $160,000. Plans deposit $7.50. Extended date. Gatter & Diehl, 321 N. Front St., Harrisburg, engrs.

Tennessee—North Central Electric Co-operative, Gainesboro, Tenn., telephone sys. in Macon, Jackson, Sumner and adjoining counties. $2,500,000. Marr & Holman, Stahlman Bldg., Nashville, consult. engrs.

Tex., Fort Sam Houston (San Antonio)—U. S. Govt., c/o Purch. & Contg. Officer, Bldg. 370, transformer bldg., Inv. No. E 41-133-51-133. $100,000. Improv. underground electric sys. at Fort Sam Houston Reservation, Inv. No. E 41-133-51-135. $90,000.

Ont., Niagara Falls—Robt. H. Saunders, chn. and Members Hydro-Electric Power Comn. of Ontario, 620 University Ave., Toronto, 4 sections hydraulic tunnel in connection with new Sir Adam Beck-Niagara Generating Station 2, to carry water from an intake above the Horseshoe Falls to point near Whirlpool Rapids, about 5½ mi. in all, each section approx. 6,255 ft. long, circular cross section, concrete lined, 45 ft. diam. Approx. $10,000,000. Plans deposit $1,000.

Low Bidders & Contracts Awarded

Colorado—Trans-Electric Co., 108 E. Oak St., Louisville, Ky., Contract Awarded, $851,499, constr. 59 mi. Salida-Gunnison 115-kv transmission line, Colorado-Big Thompson Proj., Spec. DC-3314, Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo. Bids Mar. 8, awarded Mar. 27.

Ill., Hawthorne Sta. (Cicero)—United Engineers & Constructors, 111 W. Washington St., Chicago, 2, Ill. Contract Awarded. $1,000,000. electric Generating bldg., Western Electric Co., 22 and Cicero Ave., Chicago, 2, Ill. Awarded Mar. 23.

Louisiana—Irby Constr. Co., 817 S. State St., Jackson, Miss. Low Bidder. $388,984, est. $350,000 approx. 165 mi. rural distr. lines, transmission lines, 2 sub-stations, Rapides, Natchitoches, Avoyelles, Evangeline, St. Landry and Grand Parishes. Louisiana Rural Electric Co-operative, Alexandria, La. Bids Mar. 27.

N. D., Voltaire—Commonwealth Electric Co., 1901 Y St., Lincoln, Neb. Contract Awarded. $513,700, generating plant, Central Power Co-operative, Minot, N. D.

Pa., Erie—Sessinghaus & Osterguard, 115 Peach St., Erie, Pa. Contract Awarded. $2,000,000. 125x228 ft., asbestos, masonry, steel frame power plant addn., 100 ft. high. Pennsylvania Electric Co., Johnstown, Pa. Gilbert Assoc., Inc., 412 Washington St., Reading, engr.

South Dakota and North Dakota—Moloney Electric Co., 5390 Bircher St., St. Louis, Mo. Low Bidder, $248,682, Schedule A***Westinghouse Electric Corp., 117 N. 13 St., Omaha, Neb. $1,079,853, Schedule B***General Electric Corp., River Rd., Schenectady, N. Y., $1,195,272, Schedule C, $2,561,421, Schedule D for furnishing power transformers for Garrison, N. D., Reservoir, Fort Randall, S. D., reservoir and Oahe, S. D., reservoir. U. S. Eng., 1709 Jackson St., Omaha, Neb.

Tennessee—Miller Constr. Co., Vincennes, Ind. Contract Awarded. $545,765. 156 mi. rural distr. lines and sys. imprvs., Polk Co. Tri-State Electric Co-operative, Copperhill, Tenn. Bids Dec. 12.

INDUSTRIAL, COMMERCIAL & PUBLIC BUILDINGS

Proposed Construction

Fla., Port St. Joe—Kraft Container Board Co., Port St. Joe, plant expansion. $24,011,000.

Ga., Atlanta—Emory University, 36 Butler St. S. E., plans by Robert & Co. Assocs., 96 Poplar St., health research center, $12,000,000.

Ill., Skokie—Jannette Mfg. Co., 7405 N. Cicero St. mfg. plant. $1,000,000.

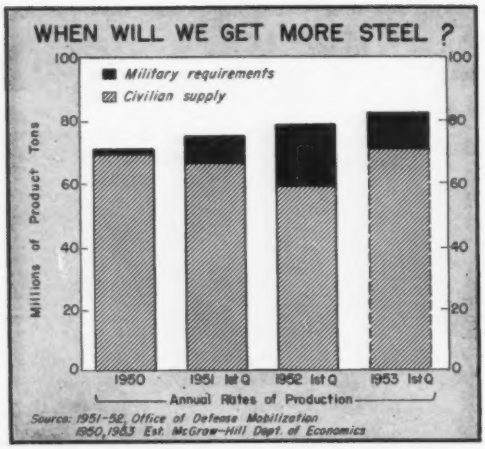
Mich., Livonia—Ford Motor Co., 3000 Schaefer St., Dearborn, 1 story tank mfg. plant, 2 story admin. bldg. $15,000,000. Albert Kahn Associated Architects & Engineers, Inc., 345 New Center Bldg., Detroit, consult. engr.

N. J., Fort Monmouth—U. S. Eng., 121 N. Broad St., Phila., Pa., plans by The Ballinger Co., consult. engrs. and archts., 121 N. Broad St., Phila., Pa., Consolidated Signal Corps. research and development laboratory. $20,000,000.

Tex., San Antonio—Carroll B. Fulton & W. H. Olmstead, 645 Grandview St., aviation gasoline plant. $11,925,000.

Utah, Salt Lake City—Phillips Petroleum Co., Bartlesville, Okla., catalytic plant unit, $10,000,000; gas plant, $1,250,000; vacuum plant imprvs. and expansion, $1,000,000.

Electrical Business Outlook



KEY FIGURES in the Wilson report are those on steel. Civilian supply will shrink in early '52 but will improve in '53

Is Mr Wilson Optimistic?

Charles E. Wilson's report to the President answers the question which has been number one on a lot of executive desk pads: When will the scramble for steel and other construction materials ease up? ODM Director Wilson's answer is quite definite: Late in 1952.

Military requirements for raw materials will reach a maximum early next year, according to the Wilson report. Construction of new defense production facilities will also be tapering off by then. And new capacity in the basic metal lines will be paying off in better supplies for both civilian and military buyers.

Right now defense is taking about 12% of finished steel output (chart above). The squeeze is worse on aluminum (near 20%), about the same on copper (12%). Both these materials also are being stockpiled.

Conditions Will Worsen First

Conditions will get worse before they get better. In the coming year, the defense take will rise to 20% of steel and the same proportion of total copper supply. Defense-supporting capital goods will take an additional bite.

But, by 1953, Wilson expects there'll be enough metals available to support output of civilian goods, like electric appliances, at pre-Korea levels. For example, steel output will be enough for a trimmed-down defense program, plus more for civilians than ever before.

But there's still a big question unanswered: Will the defense program stay on Wilson's timetable? The Pentagon was slow getting its first contracts out. It may be equally slow about getting deliveries.

Defense Program May 'Slowdown'

Washington is full of talk about a "slowdown" in the defense program. This doesn't mean the size of the program will be cut down. It means that Congress and the Administration are putting less pressure on the military to build up fast. So there's less worry about delivery dates.

There are plenty of bottlenecks in sight to stall the military program, even if production is pushed. The most obvious is the materials problem—priorities or no priorities. NPA still hasn't got a CMP plan that it's sure will work. Actually it has no CMP.

Manpower will be another difficulty. Skilled workers are critically short in many defense areas. The wage freeze and lack of housing in some cities present special problems in attracting workers.

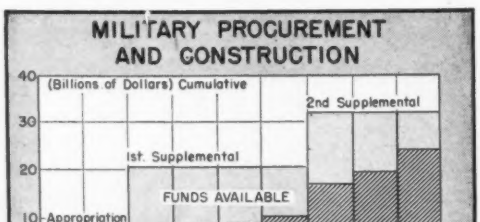
But Military Needs May Be Higher

It's also possible that the military requirements for metals and metal products will be higher than originally figured. The Pentagon still doesn't have a detailed bill of materials. And in World War II, the revisions always turned out higher.

Finally, there's the chance of more trouble in Korea, or elsewhere, and another boost in the whole level of the defense program. That wouldn't change the military take this year. It would add to the backlog to be produced later on.

Either way—if present schedules lag or if the size of the defense job is increased—the period of heaviest military production may last into 1953. That would rule out a big pick-up in lines like electric appliances until later on.

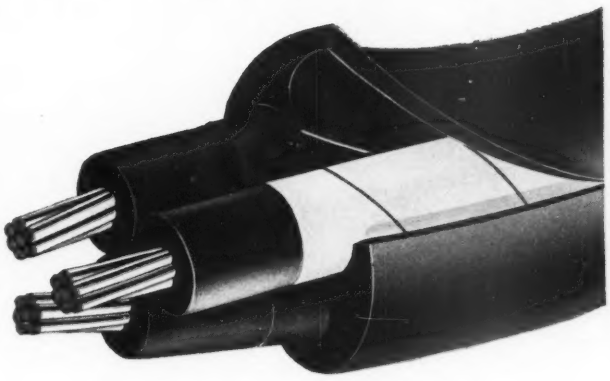
The electrical industry would benefit from Wilson's goal: Back to normal by 1953. But it won't be an easy goal to achieve. It's still too early to say when things will be normal again. But it is a fact that every day America is increasing its industrial capacity to a point where both military and civilian needs can be supplied.



SPEED of defense program shows up in contracts let. They represent future production. Funds still unobligated will mean additional production as they are spent in the future

DURASHEATH

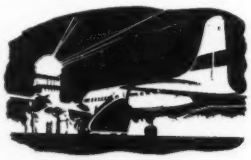
...the all-purpose cable



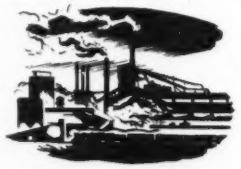
For city power and light systems

For rural power and light systems

For railroad signal systems



For airports,† mines, camps



For industrial power and light systems

good for almost any service up to **5,000** volts

DURASHEATH® stubbornly resists electrolysis, corrosion, temperature extremes, cutting, abrasion, impact, flame, oil, grease, moisture and most soil acids and alkalies. Can be run overhead, in ducts, or buried underground—or all three in one continuous run. Flexible, easy to handle and install. For further information, consult your nearest Anaconda Sales Office or Distributor. Anaconda Wire & Cable Company, 25 Broadway, New York 4, New York. 6138C

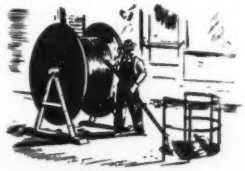
†When ordered to CAA Specification L-824 ®Trademark

the right cable for the job

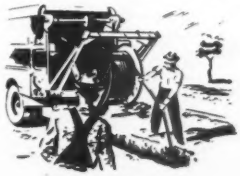
ANACONDA®

WIRE AND CABLE

String it overhead



Pull it through ducts



Bury it underground

These Same BIG FEATURES on Large or Small Units

ALLIS-CHALMERS 5/8% Step Regulators

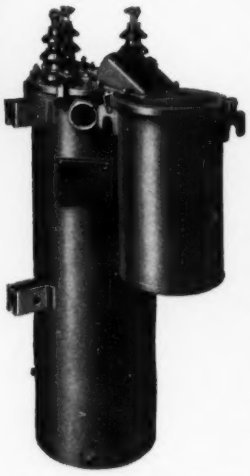
WHETHER YOU NEED an 11.4 kva regulator on a small feeder—or the biggest 2500 kva three phase unit, the entire Allis-Chalmers regulator line provides these same quality features:

- ✓ 5/8% steps.
- ✓ Close regulation (± 1 volt band).
- ✓ Easy adjustment. The same type of control used on all sizes.
- ✓ Close average voltage for all types of load maintained by voltage integrator.
- ✓ Long life contacts of liberal design to withstand hundreds of thousands of operations.
- ✓ Tap changing and drive mechanism with balanced spring action to eliminate shock . . . operates under oil for long trouble-free life.
- ✓ Unit construction to simplify maintenance.

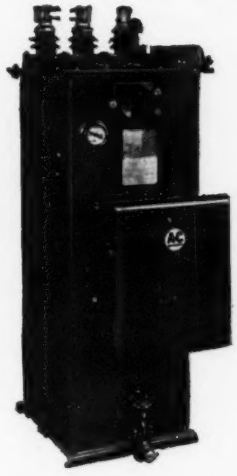
In addition, the single phase 5/8% step regulators require only 1/3 the exciting current of older types of regulators. Low exciting current releases system capacity for useful loads.

Get the complete facts on Allis-Chalmers 5/8% step regulators from your nearby Allis-Chalmers district office, or write Allis-Chalmers, Milwaukee 1, Wisconsin

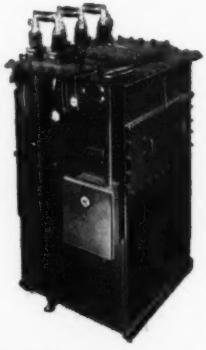
A-3359



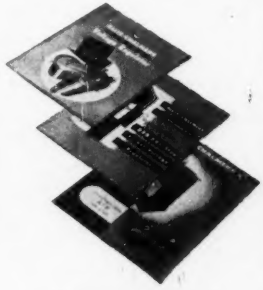
JFR — Single phase regulator, 11.4 kva, 7620 v, 15 amp.



DFR — Single phase regulator, to 250 kva, 6900 v.



AFR — Three phase regulator, sizes through 2500 kva, 69 kv.



GET THESE BOOKLETS
JFR — 01B6424
DFR — 01B6065A
AFR — 01B6056C

ALLIS-CHALMERS

Originators of 5/8% Step Regulation